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archeological investigations
volume 3

MILL CREEK DUMP
PENIEL MISSION

KLONDIKE GOLD RUSH

NATIONAL HISTORICAL PARK / ALASKA

COMPLETED

ARCHEOLOGICAL INVESTIGATIONS IN SKAGWAY, ALASKA

VOLUME 3:

THE MILL CREEK DUMP AND THE PENIEL MISSION

KLONDIKE GOLD RUSH NATIONAL HISTORICAL PARK

by
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ABSTRACT

In 1983 and 1985, the National Park Service carried out archeological investigations at the Peniel Mission, Klondike Gold Rush National Historical Park, Alaska. These investigations were initiated to determine the extent, integrity, and significance of subsurface cultural resources uncovered by utilities work in the area.

The testing uncovered several features and numerous Gold Rush period materials that had been dumped into an abandoned branch of Mill Creek. Large quantities of food and beverage-related artifacts and structural materials, and a few personal items and activity-related artifacts were found in the dump. This dump was covered over by fill just prior to construction of the Peniel Mission in 1900, effectively creating an encapsulated deposit of relatively short duration. Modest numbers of artifacts, deposited as sheet trash, were recovered from the post-1900 strata. Included in the post-1900 collection were structural materials resulting from the renovation of the Peniel Mission in 1937. It is probable that the recovered architectural materials also include items related to the Gold Rush period structures formerly located adjacent to the Peniel Mission.

This report, Volume 3 of a series on the archeology of Skagway, Alaska, outlines the research rationale for the project, and presents the physical setting and historical background of the area. Site stratigraphy and the artifact findings are discussed in some detail. The more than 38,000 recovered artifacts include a wide variety of both structural and nonstructural items and organic materials. Analysis of these materials provides a good comparative sampling of Gold Rush period artifacts from an urban setting, and concludes that the trash deposits primarily represent Skagway's bustling urban business center, hotels, and saloons. The post-1900 materials reflect Skagway's "new morality" with reduced numbers of saloons, less conspicuous consumption, and harsh economic conditions. The research also focused on: documentation of the material

culture of the period; delineation of the processes that shaped area land use; and an examination of the cultural change and cultural processes involved in the birth and evolution of the city of Skagway, including the creation of the dump.

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PREFACE

This report is volume 3 in a series of reports describing the results of National Park Service (NPS) archeological investigations in Klondike Gold Rush National Historical Park in the town of Skagway, Alaska. These excavations were conducted in order to evaluate the extent, integrity, and significance of archeological resources near structures within the Skagway and White Pass Historic District. The first two volumes describe the work done by NPS archeologist Catherine Blee (1983b, 1987). This volume, dealing with the 1983 and 1985 archeological testing and excavations of the area adjacent to the Peniel Mission, describes the investigations, and the artifacts and features found. This report also provides a fairly detailed analysis of the more than 38,000 artifacts recovered during these two seasons, and discusses these materials in relation to the known history of the area.

CHAPTER I: INTRODUCTION

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CHAPTER I: INTRODUCTION

Klondike Gold Rush National Historical Park (NHP) encompasses parts of Skagway and Dyea, Alaska, and the adjacent Chilkoot and White Pass Trails. Established to preserve and interpret physical remains of the 1897-1898 Klondike gold rush, the park includes the Skagway and White Pass Historic District, with over 50 wooden structures remaining from that tumultuous era. Although archeological excavations within this district were prompted by proposed management activities, their results also serve the larger purpose of illuminating and enriching the interpretive story of Skagway, the gateway to the Klondike. Archeology can help us understand the human behavior and cultural perceptions inherent in this fascinating episode in American history. In addition, data gleaned from these excavations will facilitate future management planning for the Peniel Mission and for the park as a whole.

Volume I contained extensive descriptions of the physical environment and its fauna and flora, as well as the prehistory and history of the area. For this reason, most of this background data will not be repeated herein, and the reader is referred to the earlier reports in this series for further information (Blee 1983b; 1987).

SETTING

Skagway lies in southeastern Alaska, which has a moist, mild climate. In the region, dense stands of Pacific Northwest coastal rain forest cover the steep mountain sides. Glaciers and ice caps feed torrential streams, which provide habitat to migratory fishes. The rich coastal environment also sustains bears, moose, mountain goats, mountain sheep, and various sea mammals. The Chilkat Tlingit found the entire region to be a productive homeland long before Euro-Americans discovered the area.

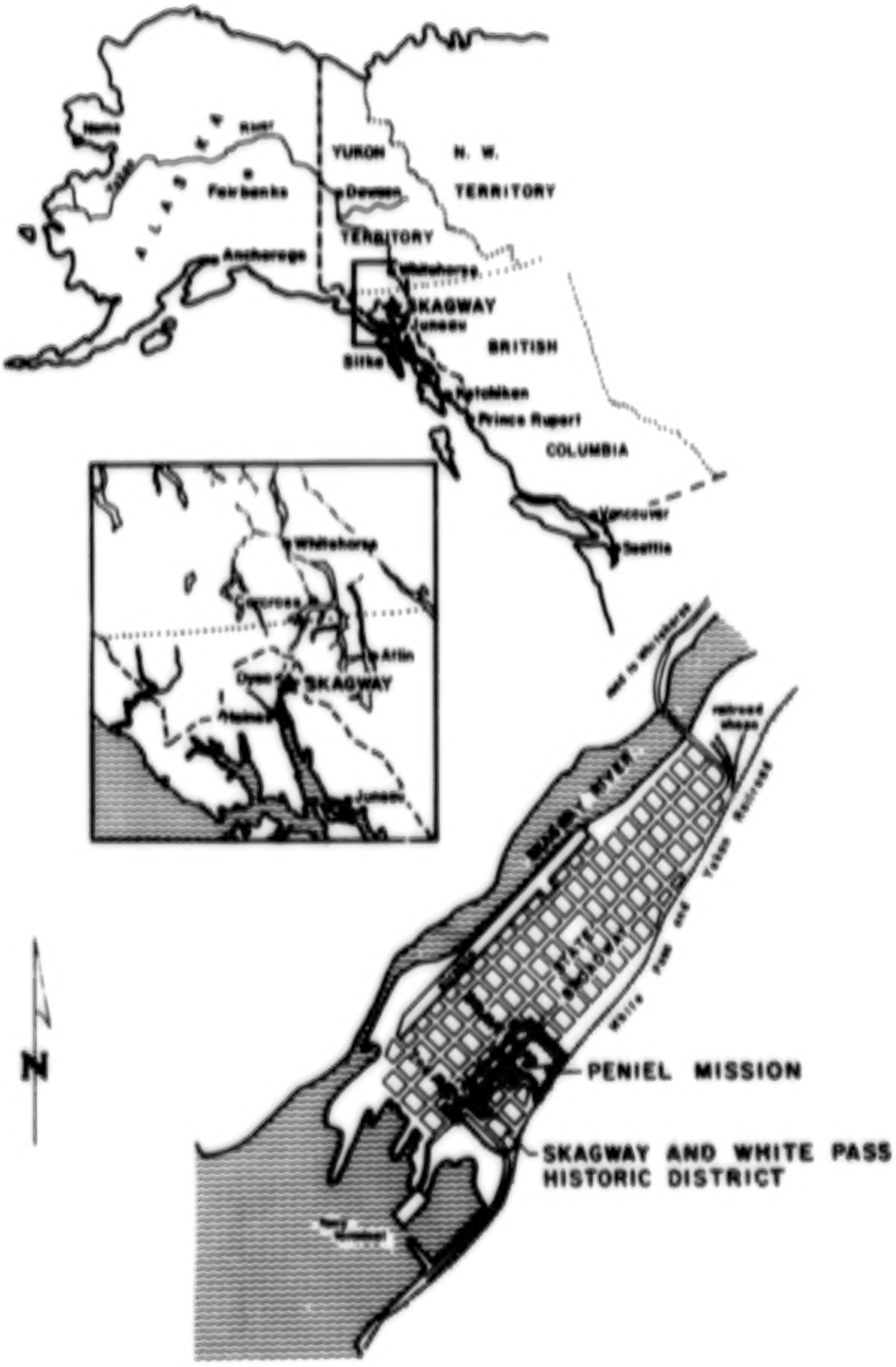


Figure 1.1: Project location

The town of Skagway is situated on the tidal flats east of the Skagway River in a narrow valley at the head of the Lynn Canal (Figure 1.1). Majestic snow-capped mountains surround the town and the inlet leading to the Canal. The geography of Alaska and Canada has played a major role in area exploration and settlement patterns. The vast distances, rivers, and high crests of the Coastal Range discouraged overland travelers. The Skagway valley is one of the few places in the region where there is ready access to the interior of the continent from tidewater, and Skagway has long served as a major transportation hub.

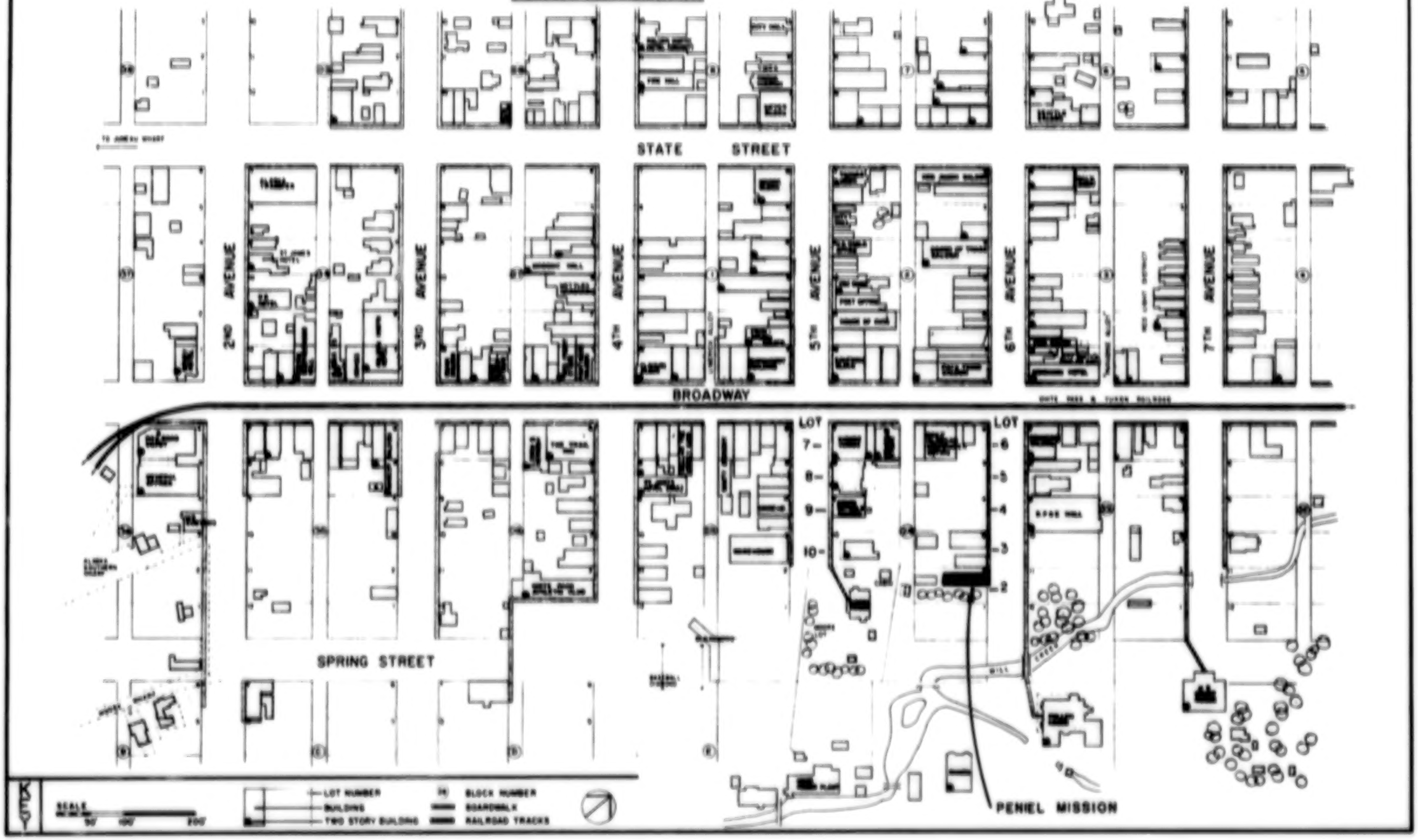
The town of Skagway, Alaska, is a part of the Skagway and White Pass National Historic Landmark District. The center of downtown Skagway has been designated the Skagway Historic District, parts of which are also encompassed by the Klondike Gold Rush National Historical Park (NHP). Both the park and the historic district are listed on the National Register of Historic Places. The Peniel Mission is one of the historic buildings included within the park and the historic district; the mission is listed on the park's List of Classified Structures (figure 1.2) (Block 24, building "f").

This 88-year-old structure is the oldest extant mission of those built by the Peniel Missionaries, an interdenominational humanitarian organization formed in Alaska in 1889 (Blee et al. 1984:429). Its "exterior appearance and architectural character" contribute a sense of ambiance to the district, reminiscent of the Gold Rush era (Blee et al. 1984:429).

The two-story frame Peniel Mission, now clad in grey asphalt siding, faces north onto Sixth Avenue one block east of Broadway, Skagway's main street (Figure 1.3). A hedge borders the north side of the relatively level expanse of lawn, which is dotted with ornamental and fruit trees. A garage constructed in the 1970s is about 15 feet southwest of the Mission (Figure 1.2: building 24E). This building is used by the National Park Service as a maintenance work area. About 150 feet south and east of the Peniel Mission, Pullen [Mill] Creek (labelled "stream" on Figure 1.2) drains southward toward the Lynn Canal. The historic Moore house and cabin are about 150 feet south of the Peniel Mission.

SKAGWAY HISTORIC DISTRICT

DISTRICT MAP - CIRCA 1910



HISTORIC DISTRICT BUILDINGS

The number and letter given with each building show its location on the 1979 map. The letter identifies the building, and the number refers to the block on which it stands. Thus, building 34 A, the Red Onion Saloon, is building A on block 34.

37 A	**United Transportation Union Hall**
37 B	**Jeff Smith's Parlor**
37 C	**Martin Itjen Residence**
37 D	**Army Barracks**
37 E	**Log Cabin**
34 A	**Red Onion Saloon**
34 B	**Washington Fruit Store**
34 C	**Washington & Alaska Steamship Company Office**
34 D	**Arctic Brotherhood Hall**
34 E	**Alaska Steamship Co. Office**
34 F	**Golden North Hotel**
34 G	**Miners Hotel**
34 H	**Red Light District Crib**
27 A	**Idaho Saloon**
27 B	**D. Lucci Grocery**
27 C	**E. A. Hegg Photographer Studio**
27 D	**Pantheon Saloon**
27 D1	**Pioneer Paints and Wallpaper Store**
27 E	**Capt. Carroll & Co. Mercantile, Masonic Hall**
27 F	**Unknown office/residence**
27 G	**James A. Nettles Tin Shop**
27 H	**Unknown shop**
27 I	**Stable**
1 A,B,C	**Theater/supermarket**
1 D	**Restaurant**
1 E	**Principal Barber Shop**
1 F	**Seattle Hotel, Frye-Bruhn Meat Market**
1 G	**D. Goldberg Cigar Store**
1 H	**Morelli Building**
1 I,J	**Slettevold Building**
1 L	**Residence**
1 M	**Quonset hut**
1 N	**Capt. William Moore Block**
8 A	**YMCA Gym and Reading Room**
8 B	**Meyer Building**
2 A	**Residence**
2 B	**House of Rich**
2 C	**Board of Trade Gambling Saloon**
2 D	**Tanner Building**
2 E	**Elk's Hall**
2 F	**Tanner residence**
2 G	**City Hall**
2 H,I	**Corrington's Gift Shop**
2 J	**Broadway Station Restaurant**
3 A,B,C,D	**National Bank of Alaska Building**
3 E	**Gutfeld residence**
3 F	**Apartments**
36 A	**White Pass & Yukon Route Railroad Depot**
36 B	**White Pass & Yukon Route General Offices**
35 A	**Hot Scotch Saloon**
35 B	**John Irving Building**
35 C	**Richter's Jewelry & Curio Shop**
35 D	**Verbauwhede Cigar Store & Confectionery**
35 E	**Boas Tailor & Furrier Shop**
35 F	**Hern Liquor Store**
35 G	**Pacific Clipper Line Office**
35 H	**Mascot Saloon**
35 I	**U.S. Customs Office**
35 J,K,M	**Klondike Hotel**
35 L	**Alaska Liquor Store Warehouse**
26 A	**Keller's Drug Store & Curio Shop**
26 B	**B. A. Whalen Curio Shop**
26 C	**Sourdough Inn**
26 D	**Igloo Bar**
26 E	**Lynch & Kennedy Dry Goods & Habberdashery**
26 F,G,H	**Trail Inn, Pack Train Saloon**
26 I	**Sourdough Inn**
26 J,K	**Klondike Hotel**
25 A	**Peterson & Co. Genl. Mercantile**
25 B	**American Tailor Shop, Skagway News Depot**
25 C	**Keelar the Money King Store**
25 D	**Bowman Barber Shop**
25 E	**Boss Bakery**
25 F	**St. James Hotel**
25 G	**National Guard Armory**
25 H	**Warehouse**
25 I,J,K	**Warehouses**
24 A	**Kirmse's Jewelry Store**
24 B	**Eagles' Hall**
24 C	**Moore's Cabin**
24 D	**Ben Moore residence**
24 E	**Garage**
24 F	**Peniel Mission**
24 G	**Wynn-Johnson residence**
23 A	**Nome Saloon**
23 B	**American Legion Hall**
23 C	**McCabe College, Federal Court House**
23 D	**Pullen House**
23 E	**Moore Office Building**
23 F	**Residence**
22 A	**Selmer residence**
22 B	**Shelly residence**

Figure 1.2: Skagway and White Pass Historic District. Adapted from: Spude (1983:140-141).

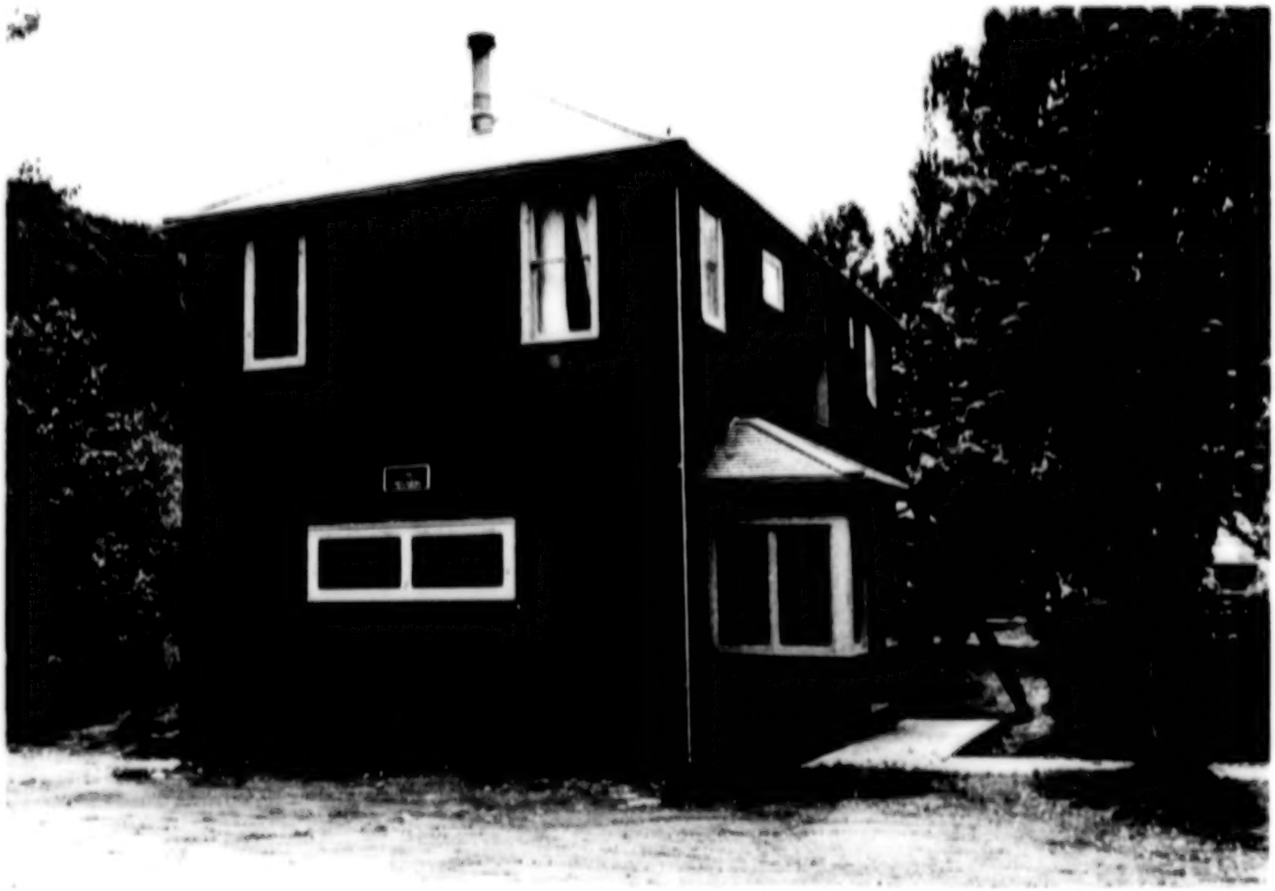


Figure 1.3: View of Peniel Mission looking southeast from Sixth Avenue.

Photo Credits: On file at Klondike Gold Rush NHP.

CHAPTER II: RESEARCH PROGRAM

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CHAPTER II: RESEARCH PROGRAM

INTRODUCTION

In the spring of 1983, the park proposed installation of a new waterline between the NPS garage and the Peniel Mission. Archeological excavations were initiated at the Mission to comply with the requirements of Section 106 of the National Historic Preservation Act. Testing was necessary to locate and evaluate the significance of any extant cultural resources that might be disturbed by the waterline or by later rehabilitation proposed for the Peniel.

Results of the initial shovel tests suggested the presence of significant historic artifacts and features in the vicinity of the Mission, therefore NPS archeologists Catherine Blee and Marianne Musitelli completed excavation of the waterline trench for a distance of 20 feet southwest of the structure. This trench intersected one corner of a subsurface deposit of cinders, coal, and charcoal, which was mixed with large quantities of glass and other domestic trash.

Unfortunately, the source and extent of these deposits could not be determined from the limited section of the feature visible in the waterline trench. It was clear that additional work at the Peniel--such as the proposed foundation rehabilitation and installation of new utilities--would damage or destroy archeological evidence, some of which was obviously deposited during the Klondike Gold Rush. In order to determine the origins and integrity of these significant subsurface deposits, and to expedite cultural resources compliance on proposed rehabilitation work, additional excavation was completed in the summer of 1985. National Park Service archeologist Diane Rhodes, assisted by archeologist Marianne Musitelli and screener Patricia Lockeman, excavated four 5-foot square test units and six 1-foot diameter shovel tests west of the Peniel Mission.

In the past, archeological and historical efforts in Skagway have been concentrated on the Depot, the Moore residences, and several commercial buildings along Skagway's main street. Prior to 1983, no investigations had been done in the immediate vicinity of the Peniel Mission. It was hoped that the 1985 archeological work would broaden our knowledge of the Gold Rush and its part in the story of Alaska's boom years. It was anticipated that this data could also help weave the disjointed histories of individual structures in Skagway into the whole cloth of understanding and awareness, benefitting future interpretive programs and cultural resources management in the park.

RESEARCH DESIGN

This report focuses upon several broad questions and considerations rather than serving merely as a laundry list of artifacts that might support or help explain the area's written history. Human behavior is heavily influenced by a variety of social, cultural, economic, and environmental factors. A systemic view of the past must take these factors into consideration.

Skagway is at once both unique and representative of the boom-towns that characterized the mining frontier in the west. Canadian researchers have divided the Gold Rush era into four phases of evolutionary development, each "moulded by differing sets of historical, social, political and economic variables" (Minni and Ross 1978; Burley 1979:2). The first period, lasting until 1898, combines the initial gold rush with earlier occupations. Burley notes that this period is "characterized by people well equipped for life in the harsh Klondike environment. Logistic patterns and supplies would be of a traditional nature" (Ibid. 1979:2). The second phase covers the years 1898 to 1900, encompassing the primary 'boom' period and the "onslaught of thousands of 'ill equipped' outsiders into the region. . . . Consumer and subsistence commodities were expensive but gold was plentiful for many" (Ibid. 1979:2).

The third period, 1900-1905, is characterized as a time of political and social stabilization and corporate consolidation. Organizational structures such as churches, social clubs, and political entities, etc. have become well established in the community. The major services such as law enforcement, fire protection, water, sewers, electricity, and telephones are in place. The number of merchants and distributers has decreased, but those that remain are serious community boosters, less likely to abandon shop for the next gold strike than some of their predecessors.

The fourth historical period, 1906 and later, marks the culmination of the rush and the individualistic style of mining practiced earlier. Instead "gold mining becomes an entirely corporate affair and there is continued consolidation and mechanization on the gold fields" (Burley 1979:2). This marks the period of decline in Skagway and other frontier communities tied economically to the extractive ventures in other areas. Along with tourism, transportation of ore through Skagway continues to maintain the town, albeit on a much reduced scale.

Although Burley's scheme was devised for the Canadian Klondike, parts of it are equally applicable to work at Klondike Gold Rush NHP.

A similar scheme was proposed by historian Robert L.S. Spude in his 1983 report on Skagway. Spude divided the town's growth and development into four activity phases: Phase I: Pioneer Tent City, 1887 to 1897; Phase II, Gold Rush Boom Town, fall 1897 to spring 1899; Phase III, Mature Railroad town, 1899 to 1905; and Phase IV, Tourist Town, 1905 to present. It also could be said that the Phase III lasted until 1980, overlapping with Phase IV, since the White Pass and Yukon Route was the single largest employer in the community until 1982.

It is clear that the trash deposits found in the lower strata of several of the excavation units and in the 1983 test trench were created prior to January, 1900, and would relate to the gold rush. Skagway's post-1900 period of stabilization and settling in also shows many similarities to the Canadian experience. Features and recovered artifacts were examined within this frame of reference.

Specific Research Questions: At first it was thought the trash deposits discovered in the waterline trench were the remains of a burned structure. Observation of the artifacts and the overlying strata indicated that these deposits dated to the gold rush, the first encountered deposits found in Skagway which were solely attributable to this period. Additional testing of this area was proposed because it was readily apparent that work at this site could contribute a great deal to Skagway's history, and more specifically, to the history of block 24 and the Peniel Mission. On broader scale, work at this site would increase our understanding of the gold rush period in Skagway, as well as providing additional interpretive possibilities and expanded data base for the park's interpretive program.

The broad themes or historic contexts defined for Klondike Gold Rush NHS helped define the overall, long-term project research goals. The central, unifying historic context is, of course, the Klondike Gold Rush and the accompanying socio-cultural framework established during the rush.

The initial research questions dealt rather specifically with the nature of the deposits; was this a burned building or other structural element? If not, what were the deposits, who created them and when were they created? Why were they here? What was the relationship of this feature to the adjacent Peniel Mission? To the nearby business district and to the larger community? Did the feature give us additional clues to the history of the Peniel Mission? What could the archeology of this area tell us about the gold rush in Skagway and the people who participated in it?

When it became clear during excavation that the buried trash was part of a gold rush period dump, additional research questions began to emerge. Again, the initial questions dealt with site function and chronology:

- How and when was the dump created? Was it related to the larger community or did it represent the refuse from one family, business, or area of town?

- On a more general level, what could these materials tell us about the Skagway's role in the gold rush?

- Major technological changes were occurring at the turn of the century. Could the dump provide documentation and explication of some of these changes?

- Some contemporary authors wrote of scarcity and high prices, while others discussed the readily availability of a wide variety of supplies. What did the trash deposits tell us of supply and demand, of sources for foodstuffs and supplies. Contemporary writers noted the phenemon of conspicuous consumption in association with mining and gold rushes. What could the dump tell us of consumption practices in Skagway? Were the newly rich and/or the hopeful really conspicuous consumers? How did our findings compare with historical accounts?

Nearly nine decades had passed since the deposition of the burned trash. The formal records of property ownership and other written documentation held very little information specific to the occupants of town lots 2 and 3. Examination of the accumulation of the debris of daily life above the trash deposits could help elucidate and enrich our knowledge of post-gold rush Skagway. Specific questions included:

- How does the temporal and spatial distribution of the overlying sheet trash contribute to our understanding of activities in and around the Peniel Mission and the adjacent structures?

- Do the Post-1900 deposits provide additional information regarding the construction and remodeling history of the Peniel?

- Can we gain additional insight into the cultural change evident in Skagway between Burley's second and third periods through comparison of the gold rush deposits with the Post-1900 deposits?

Not all of these potential research questions could be discussed at length in the context of this report, so the choice was made to first provide an in-depth analysis of the archeological findings and answer specific questions related to site chronology and function. Then, additional project goals were developed to include the identification, elucidation, and explanation of the phase(s) of evolutionary development (as defined by Burley and others) that apply to Skagway, and to the archeological findings at the Peniel Mission in particular. Attention was focussed upon the second period of Burley's evolutionary scheme, especially Skagway's primary gold rush period.

FIELD WORK METHODOLOGY

Proposals for installation of a 2-inch waterline from the Peniel Mission to the Park Service garage were reviewed at the beginning of the 1983 project, and a transect line was set up along the waterline corridor as a basis for sampling (Blee 1983a:2) (Figure 2.1). At five-foot intervals along this line, thirteen 1-foot diameter shovel tests (Operation 20) were excavated in arbitrary 6-inch levels to sterile alluvial sands. Previous work in the area indicated that no cultural bearing deposits were found below the alluvial gravels that formed the base for the historic soils, so excavation was halted when the sterile alluvial sand/gravel deposits were reached (Blee 1983a:13).

When a mixture of ash, charcoal, cinders, and artifacts was found about a foot below ground surface in the four shovel tests closest to the Mission, the testing program was expanded. The 18-inch wide by 20-foot long trench (Operation 21), excavated stratigraphically along the transect line, intersected the burned area (Figure 2.1). All excavated material was screened through 1/4 inch mesh. Artifacts recovered from the screens were bagged by strata.

In the summer of 1985, a datum was established at the southwest corner of the Peniel Mission, and the 30-foot square area directly west of the structure was laid out into thirty-six 5-foot square excavation units (figure 2.1). Elevations were taken from city telephone posts. This excavation was labeled Operation 25; associated 1985 shovel tests were denoted as Operation 29.

Six shovel tests and four full units were excavated. Units A and B were excavated first. Unit A (numbered N5W10 for the location of its northwest corner 5 feet north and 10 feet west of the datum established on the southwest corner of the Mission) was dug immediately adjacent to the burned area reported in 1983. Unit B (N15W20) was situated due northwest of Unit A, about midway across the gridded area. A third unit, Unit C (N30W10) was opened at the north end of the Mission yard, and Unit D (N25W30) was placed at the far northwest corner. Placement of these units and the six shovel tests shown on figure 2.2 was intended to maximize area coverage with a minimal amount of excavation.

The 5-foot square excavation units were trowel dug by natural stratigraphic levels which were defined by their consistent color and texture. Uppercase letters were assigned to each strata as encountered during excavation, that is, levels A through I from top to bottom. During report preparation, additional designations were used to group these stratigraphic levels into broader categories. These level designations, labeled with uppercase Roman numerals, will be discussed in chapter 4. Features included assemblages of artifactual materials in a specific stratigraphic context as well as anomalies or non-recoverable intrusions into the stratigraphic sequence. Surfaces of stratigraphic levels were mapped prior to excavation. Features, certain large items, and some diagnostics were mapped in situ. Features were numbered, in arabic numbers, in the sequence in which they were discovered. Upon occasion, additional maps were made of features midway through their excavation to allow for more precise definition. At the base of each excavation unit, stratigraphy was recorded. Black and white and color photographs were taken of features, all four profiles, and of each stratum. Detailed soil profiles were drawn to scale for each unit/test (figures 2.4 through 2.9). Soil types and Munsell color were recorded. Soil samples were taken both during and at the end of unit excavation.

Upper strata were dry-screened through 1/4 inch wire mesh. When water-saturated deposits of artifact-laden cinders were found, the excavated matrix was water screened to facilitate artifact identification.

Pieces of burned and unburned coal, cinders, and clinkers were collected in the upper strata. However, when lower strata were found to have disproportionately high quantities of these materials--replacing soil as a matrix around the artifacts--only representative samples were kept. All cultural material, including shell, bone, and seeds, was collected and bagged by provenience.

Because this project dealt with an historic site whose original structures, appurtenances, and lot survey were all laid out in feet and inches rather than in the metric system, all measurements documenting site strata, features, and artifacts, were made in feet and tenths of feet. Terminology used for the range of dimensions for sediments (i.e. cobbles, pebbles, etc.) generally conforms to the Tyler Scale of Grades of Clastic Sediments as described in Joukowsky (1980:205).

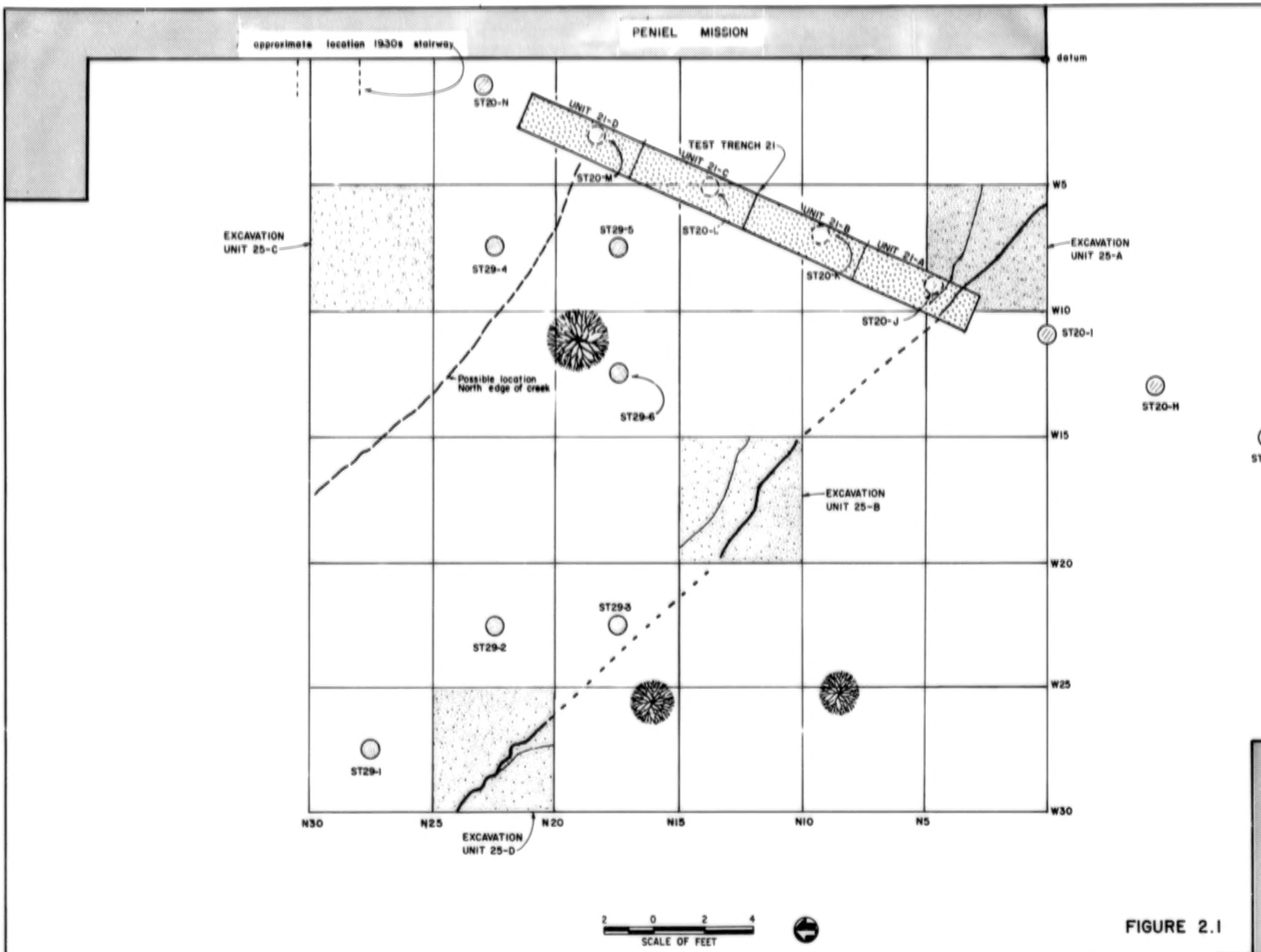

FIGURE 2.1

Mark	Sheet	REVISION	Date	Initial
A	ALL	CHANGES TO ALL SHEETS	7/88	D.R.

DESIGNED
RHODES
DRAWN:
RHODES
TECH. REVI
BLEE
DATE 7/

LABORATORY METHODOLOGY

Artifacts were cleaned, by dry brushing or washing, sorted, stabilized, and inventoried in a field lab established in the park headquarters area in the Depot. They were then packaged and, along with the soil samples, shipped to the Denver Service Center for analysis and archeological cataloging. Standardized catalog forms were developed using a combination of National Park Service Museum Catalog Record Work Sheets and artifact attribute forms developed at the Denver Service Center. Wherever feasible, glass and ceramic artifacts were mended to facilitate identification of their form and function. Unfortunately, given the large quantities of artifacts, the sampling techniques, and the nature of the deposit, little cross-mending was possible. Diagnostic artifacts and those that cross-mended were given a unique number composed of locational data and a discrete artifact number; i.e., artifact number K.EU25D.134 is the 134th consecutive artifact catalogued for Klondike Gold Rush NHP, Excavation Unit D, Operation 25 (1985 Peniel excavations). Artifacts recovered during both the 1983 and 1985 excavations were itemized in a computer-generated inventory which is summarized in tables in the text and in Appendix B.

Wherever possible during the cataloging and classification process, the manufacturing date and place, and the probable artifact function were identified. If they could not be identified, the artifacts were described for future reference. Dating of many items was based upon publications such as the 1895 Montgomery Ward catalog, and the Sears Roebuck and Company catalogs for 1897, 1900, 1902, and 1927. Published lists of maker's marks, manufacturers and manufacturing dates were used also. In the case of glass artifacts, dating was also based upon the manufacturing techniques employed. Because of the large quantities of glass, no attempt was made to distinguish lime soda glass from leaded glass.

Ceramics were grouped primarily by their paste, subdivided by glaze and decorative techniques (Goodwin et al. 1983:105 et seq.). Following project and report completion, the artifacts will be stored at the park.

CHAPTER III: BACKGROUND INFORMATION

CHAPTER III: BACKGROUND INFORMATION

INTRODUCTION

An understanding of the people and events that helped shape this site are crucial to its understanding and interpretation. To adequately analyze the record of human land use and the cultural implications represented by the features and artifacts excavated at the Peniel Mission, it is necessary to review the known historical data. Two distinct historical periods--pre-1900 and post-1900--have been documented archeologically for the Peniel site. These divisions are based on known land use, recovered artifacts and identified features, and on the observed stratigraphy. Chapter III will provide an overview of the documentary history for the site, and Chapter IV will be concerned with establishing the archeological context of the excavation findings.

This report does not discuss regional prehistory or the early period of Euro-American contact with Native Americans because these topics were covered in the earlier reports. In addition, the archeological findings at the Peniel Mission provide no evidence for use by earlier groups.

References have been made to several historic photographs throughout this chapter. These photographs (Figures 3.1 through 3.13) and an accompanying legend of buildings have been included at the beginning of the section for convenient reference.

HISTORICAL SUMMARY

The Klondike Gold Rush. The Klondike Gold Rush began in August of 1896 when rich deposits of gold were discovered on Rabbit Creek, a tributary of the

LEGEND OF BUILDINGS:

BUILDING A:	Astoria Hotel
BUILDING B:	Kitchen?
BUILDING C:	Coal Shed?
BUILDING D:	West hip-roofed building
BUILDING E:	Superior Barber Shop
BUILDING F:	Long narrow building, Colorado Lodging House
BUILDING G:	Cottage number 1
BUILDING H:	Cottage number 2
BUILDING I:	East hip-roofed building
BUILDING J:	Cottage number 3
BUILDING K:	Temporary Peniel Mission before removal from Sixth Street
BUILDING L:	Moore cabin
BUILDING M:	Moore house
BUILDING N:	Officer's Quarters
BUILDING O:	Lean-to?
BUILDING P:	Peniel Mission
BUILDING Q:	Elk's Hall
BUILDING R:	Barracks
BUILDING S:	Unknown. May be building "K" following its removal from Sixth Street
BUILDING T:	Shack, removed by Spring, 1898
BUILDING U:	Unknown

Historic Photographs

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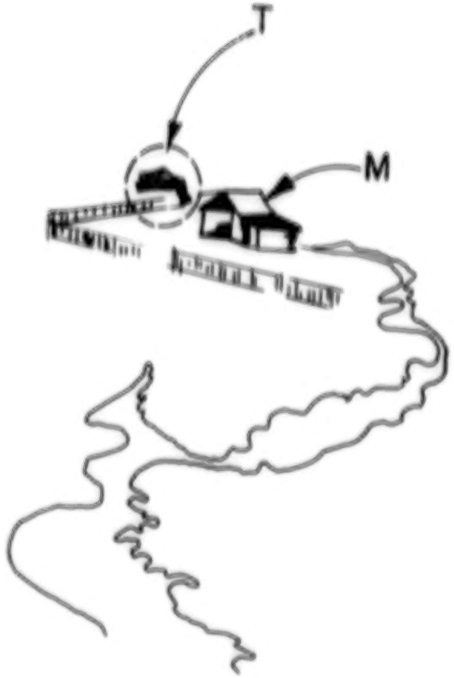


Figure 3.1 View of Skagway, Alaska, looking northwest, January, 1898. Astoria Hotel and Building I have not yet been built. Credits: Detail from photograph on file at Suzallo Library, University of Washington, Seattle.

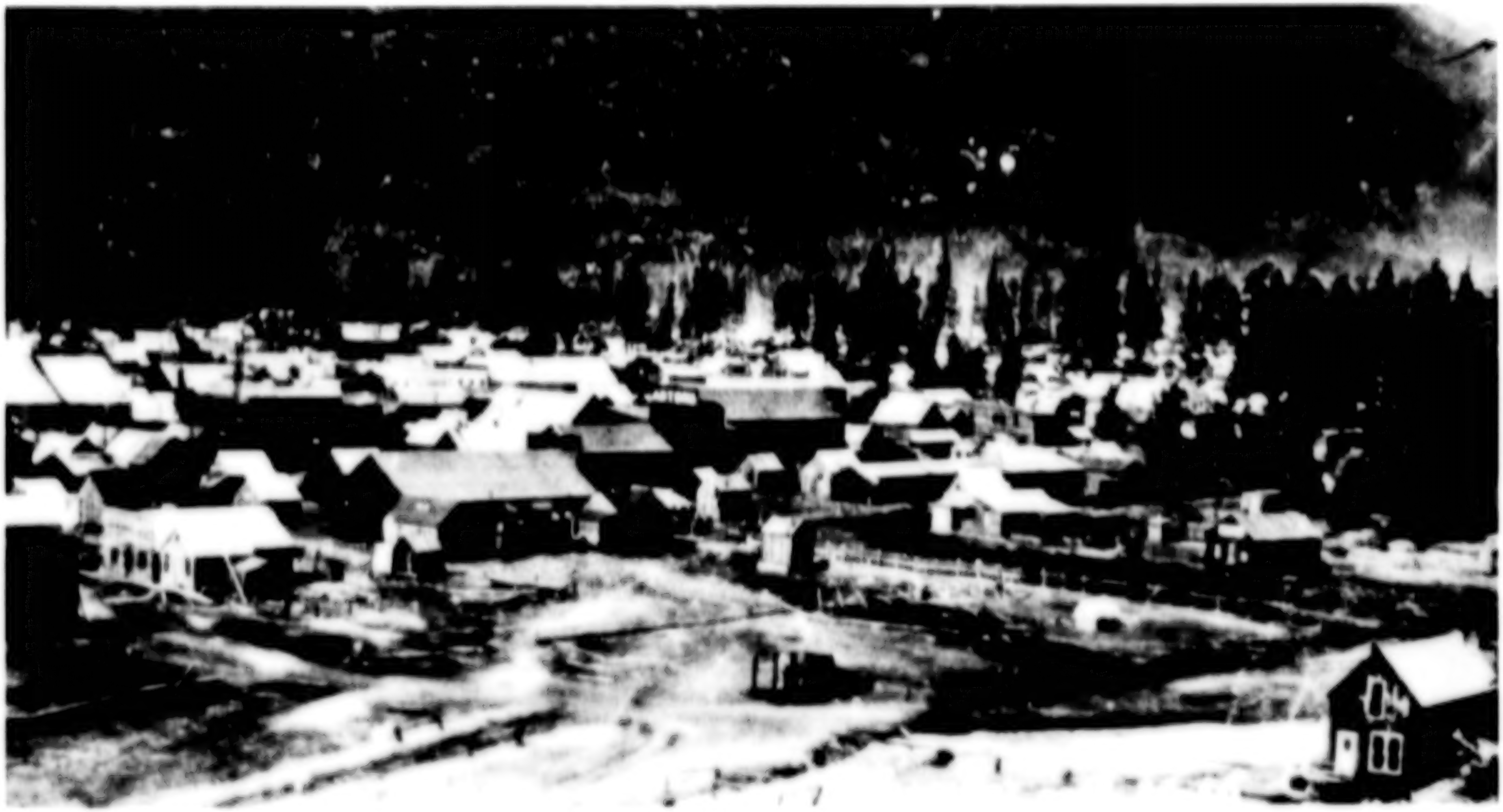
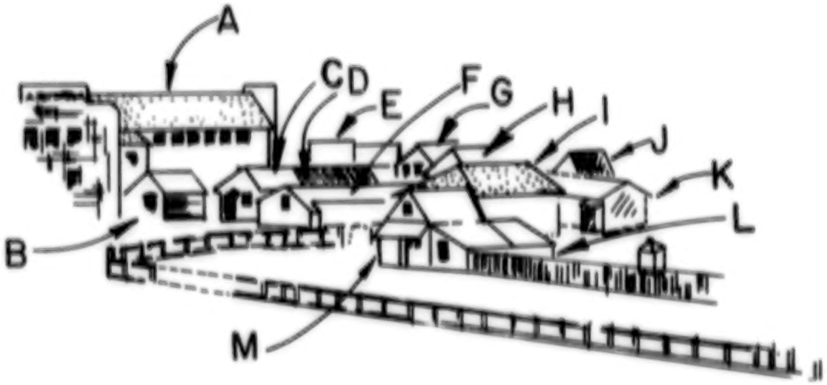


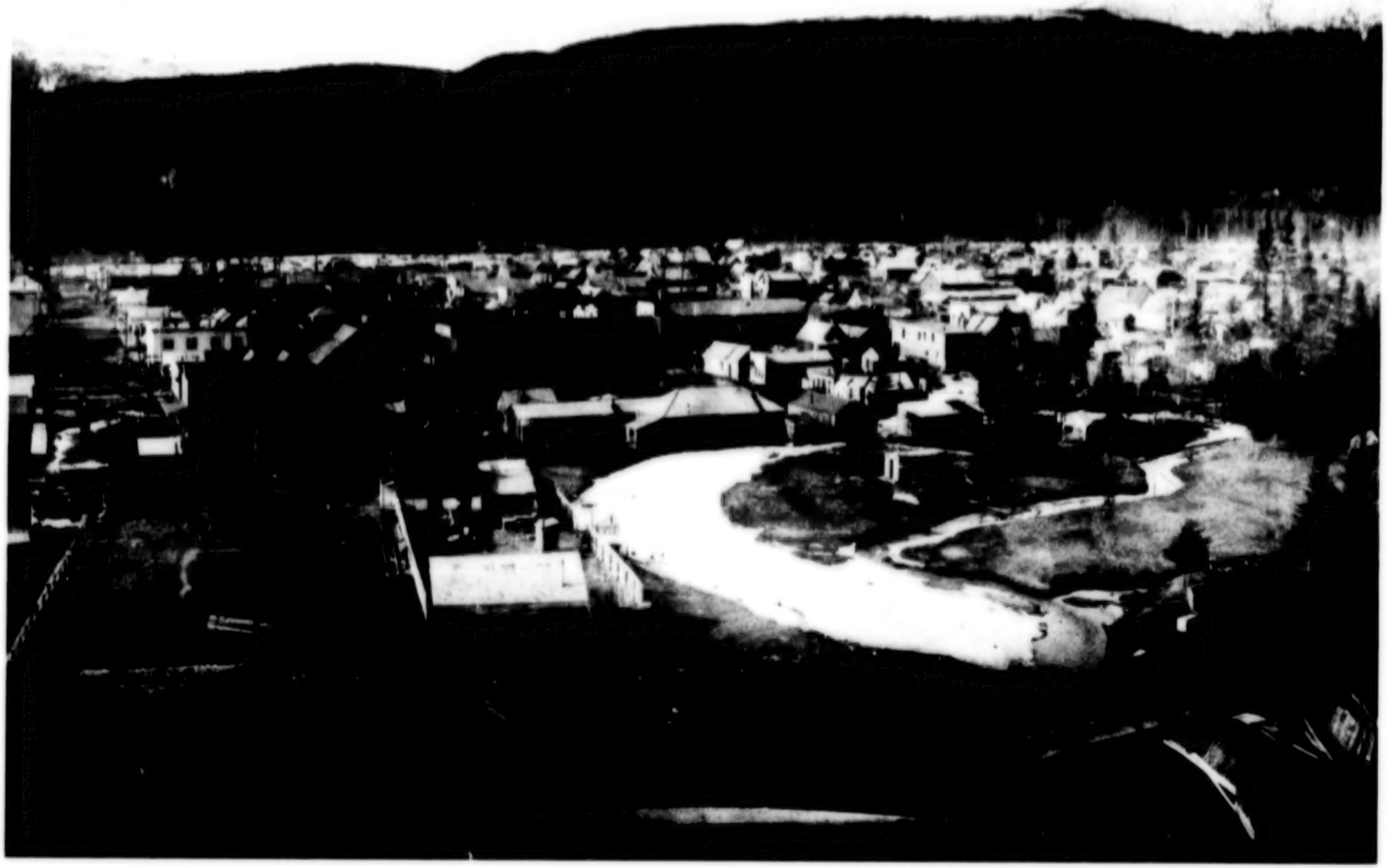
Figure 3.2: The Astoria Hotel and Moore homestead area, April 29, 1898, view looking northwest. Photo credits: Enlargement from photograph entitled "Skaguay, April 29, 1898" on file at the Suzzallo Library, Special Collections, University of Washington, Seattle (No. SO-16-257-A-20).



The Moore house and cabin (buildings M and L) are in the center foreground with buildings I and K (east hip-roofed building and the first Peniel Mission) to the north. The Astoria Hotel (building A) and the two small structures used by the Army as a kitchen and coal shed (B and C) are to the center left. A complex of unidentified structures (D, the west hip-roofed building; F, a long narrow building [Colorado Boarding House]; and I, the east hip-roofed building) lie between the Astoria Hotel and the Moore homestead on the south side of Sixth Street. Several more structures are visible on the north side of the street (building D, Superior barber shop, building G, cottage number 1; building H, cottage number 2; building J, cottage number 3; and building K, the first Peniel Mission.

Figure 3.3: View of Moore house and cabin looking west. Note the deep stream cut at far right edge of photograph.

Photo credits: Detail from photograph on file Trail of '98 Museum, Skagway, Slaska (Photo #79-32)



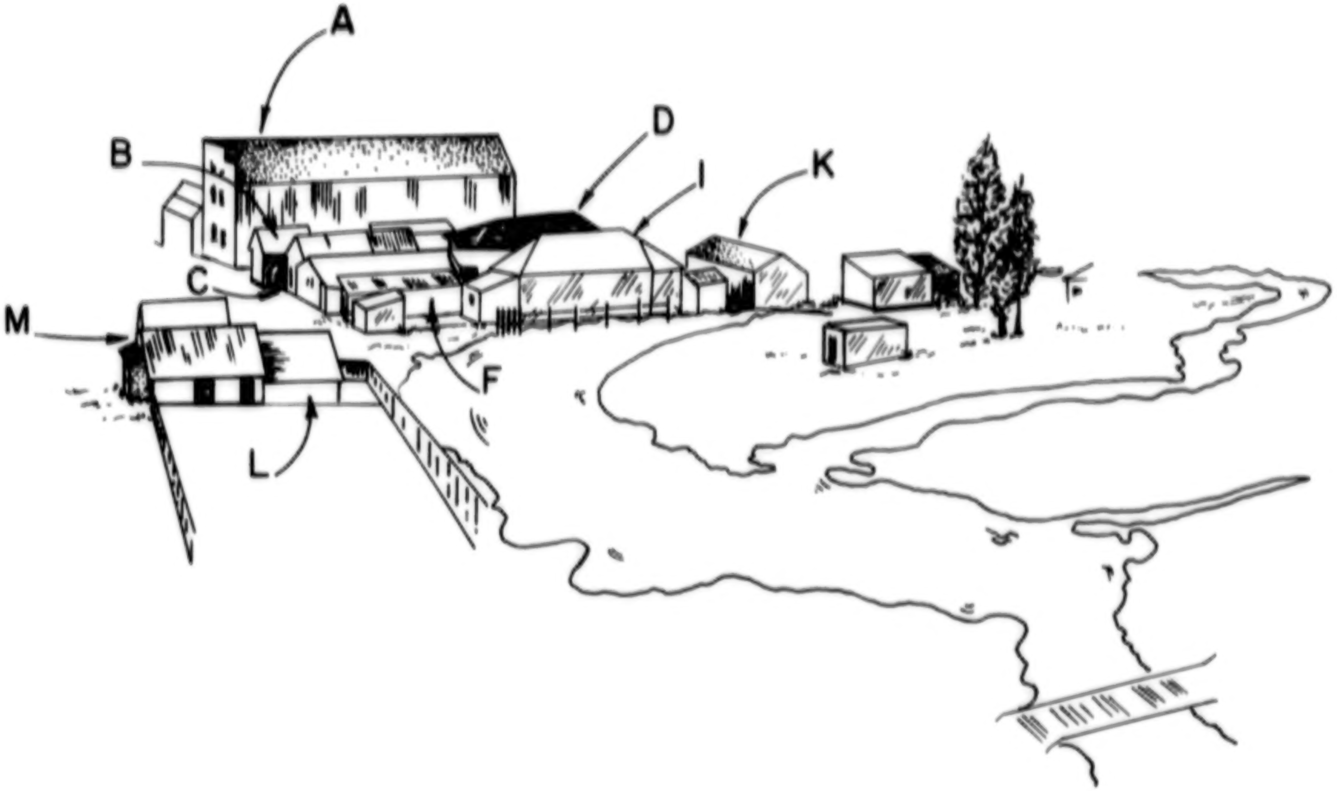


Figure 3.4: View of the Moore homestead and Mill Creek, looking down and to the northwest across the northern part of Skagway. The Skagway River is in the background.

This circa 1899 photograph shows Mill Creek and the swale area north of the Moore house and cabin. The swale is filled with snow. Note that building I, the eastern hip-roofed building, is right on the edge of the stream cut.

Photo credits: Enlarged detail from photograph credited to Trail of '98 Museum, Skagway, Alaska (Photo #79-32).

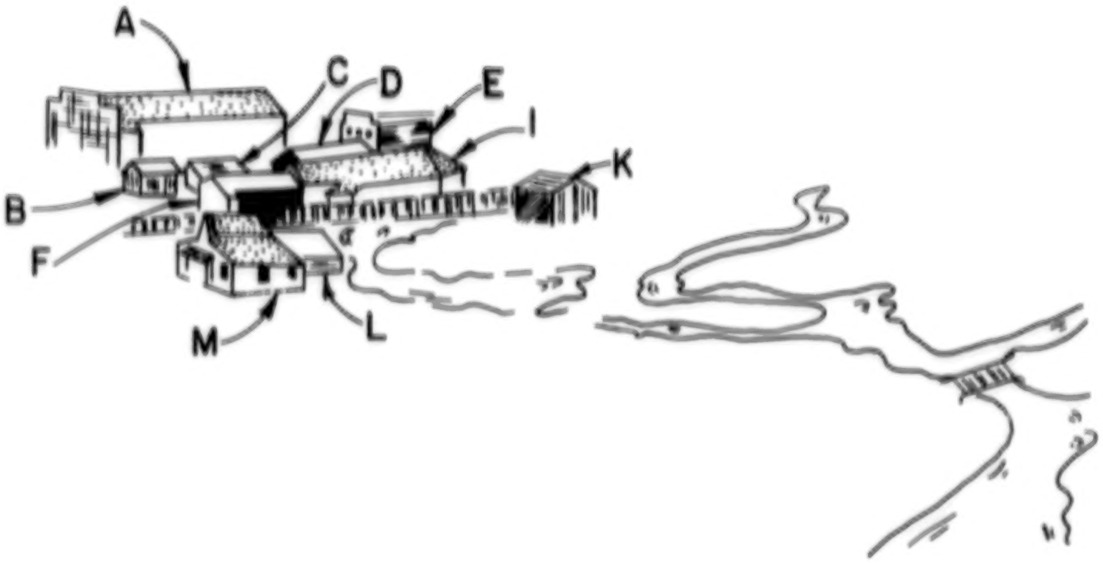


Figure 3.5: Moore homestead and northern part of city of Skagway, June 14, 1899. View looking west/northwest.

This photograph shows a slightly different perspective of the Astoria Hotel and the Moore homestead. Note that the Moore house appears to have been enlarged, and is now painted white. The Mill Creek stream bed is still visible behind Moore's cabin as the stream winds northward between structures K and I. It appears that most of the water is now coming down the east fork of the stream.

Photo Credits: Detail from photograph entitled "The White Pass and Yukon Route." On file at Klondike Gold Rush NHP (50-89, 1648)

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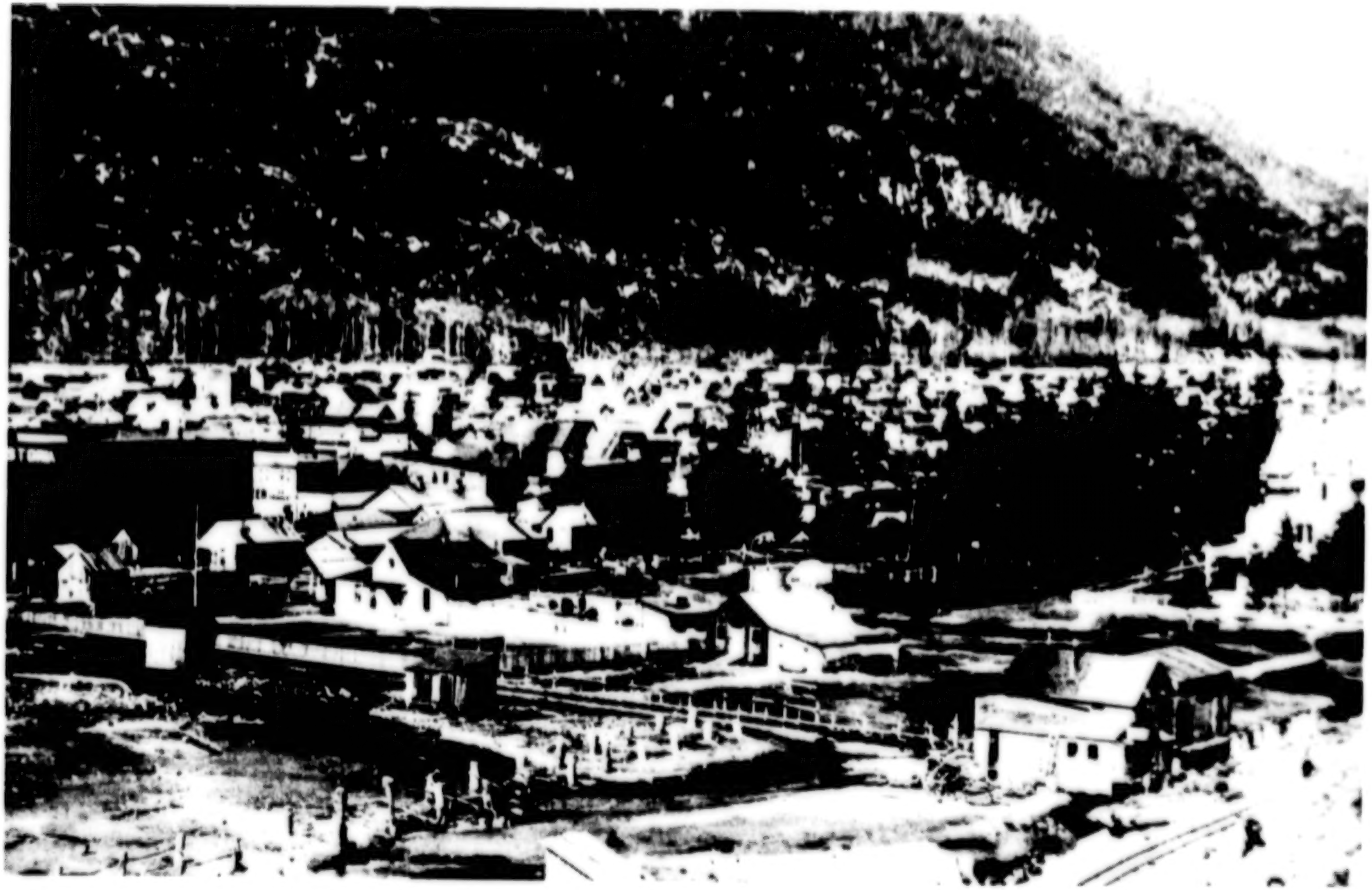
Figure 3.6: Company L, 24th Infantry, in front of the leased barracks in the Astoria Hotel. This photograph, taken after mid-September, 1899, shows the view to the southeast from Sixth Street.

Building D is in the left center of the photograph; the small structure (building U) directly behind the Astoria Hotel has not been identified.

Photo Credits: Photograph courtesy of Priere de Mentionner, National Photography Collection, Public Archives Publiques, Canada. (No. 6th-6-813-A-17).



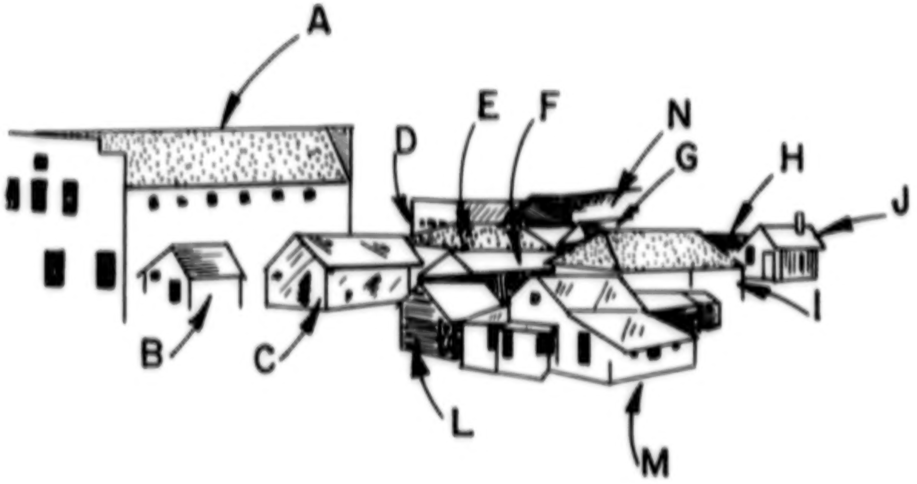


Figure 3.7: Moore homestead and structures along Sixth Street in late summer or early fall, 1900. View looking northwest toward the Skagway River.

By the summer of 1900, the Moore cabin has been moved just west of the remodeled Moore house. Boardwalks are visible along the east side of building I, and appear to lead to a small building beside building I. The vacant area just east of building I appears to be fairly flat and smooth, suggesting that the west fork of Mill Creek has been filled and the area leveled. Building K, used temporarily by the Peniel Missionaries, has been moved from its previous location. It is possible that the temporary mission is included in the complex of small structures just south and east of building I. Building N, thought to be the Officer's Quarters, has been added next to building E, the Superior Barber Shop.

Photo Credits: Enlargement from photograph on file at Sheldon Museum, Sitka, Alaska (No. SO-55-1019-A-19).

ASTORIA

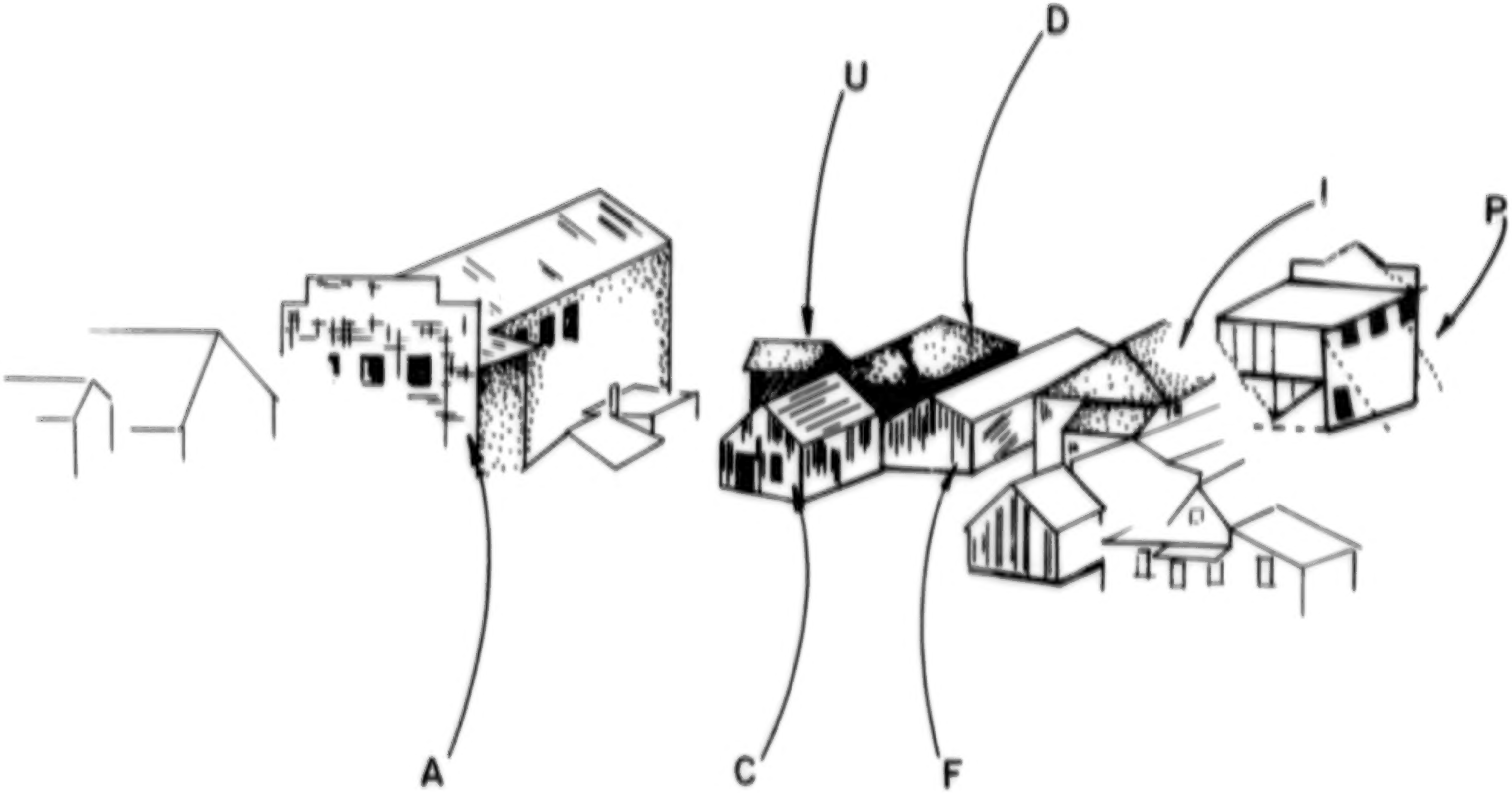


Figure 3.8: Looking down and northwest at Peniel Mission under construction, fall, 1900.

Photo Credits: Detail from photograph entitled "Skagway, Alaska" by Case and Draper, no. 469. Credit Trail of '98 Museum, Skagway, Alaska. (No. A01-30).

CASE & DRAPER

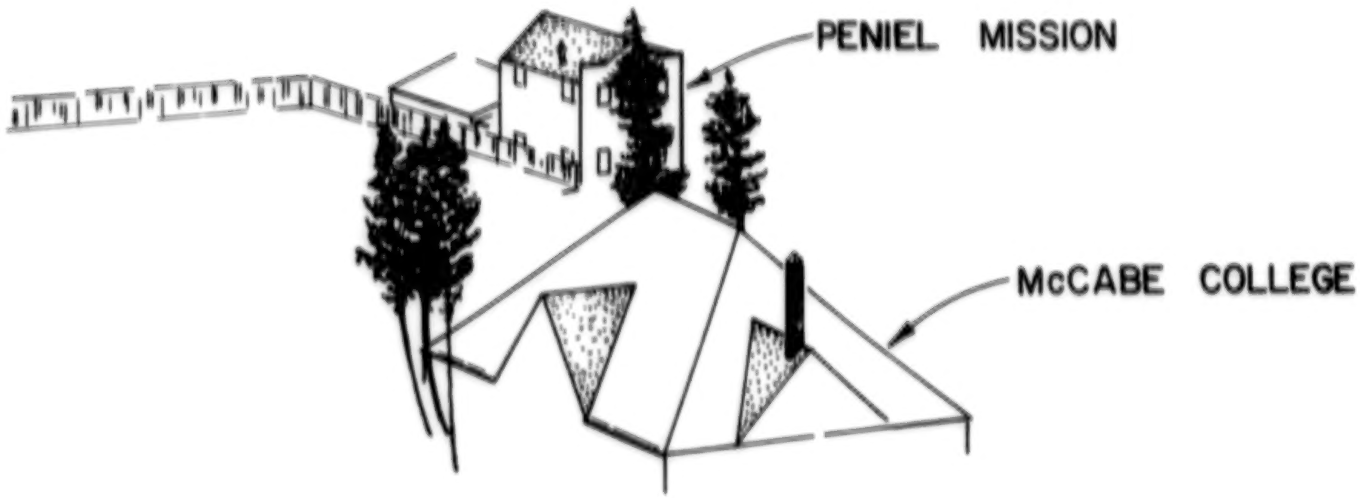


Figure 3.9: McCabe College, U.S. Army Barracks, and the Peniel Mission, spring/summer 1901. View looking southwest across Skagway towards the Lynn Canal and the Skagway River inlet.

This 1901 photograph shows the Peniel Mission, the Catholic Church, and McCabe College. Note the structure(s) immediately behind the Peniel Mission.

Photo Credits: Enlargement from photograph on file, Moore Collection (41), University of Alaska Archives, Fairbanks. 76-35. (No. SO9-6-A-16).

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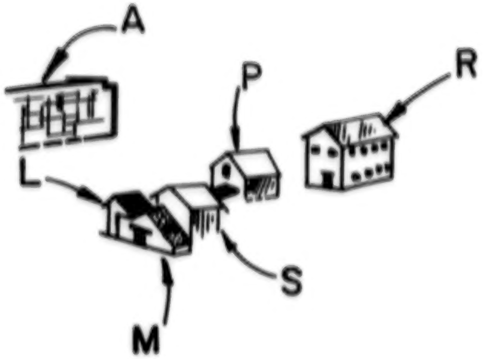
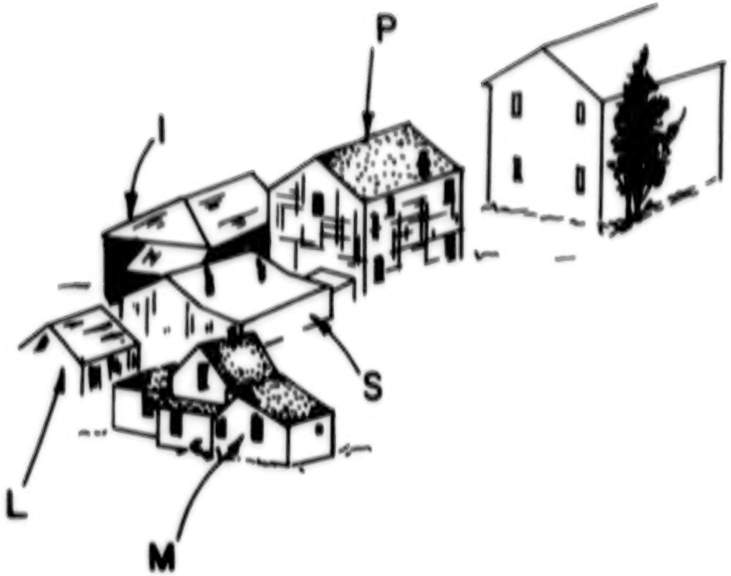


Figure 3.10: View of Skagway, Alaska, looking northwest to the Skagway River.

This photograph dates somewhere between winter, 1900 and 1903? Note tht the Catholic Church has been built on the south side of block 24; the Astoria Hotel is still in place. The small structure thought to be the Army kitchen for the Astoria appears to have been turned 90 degrees, and now faces east. The large false-fronted Elk's Hall has been added on the north side of Sixth Street next to building G. The small barber shop is still in place across the street from the Astoria. The large white structure directly across the street from the Peniel Mission is the barracks.

Photo Credits: Enlargement from photograph on file at the University of Oregon Library. (No. SO81-1383-A-15).



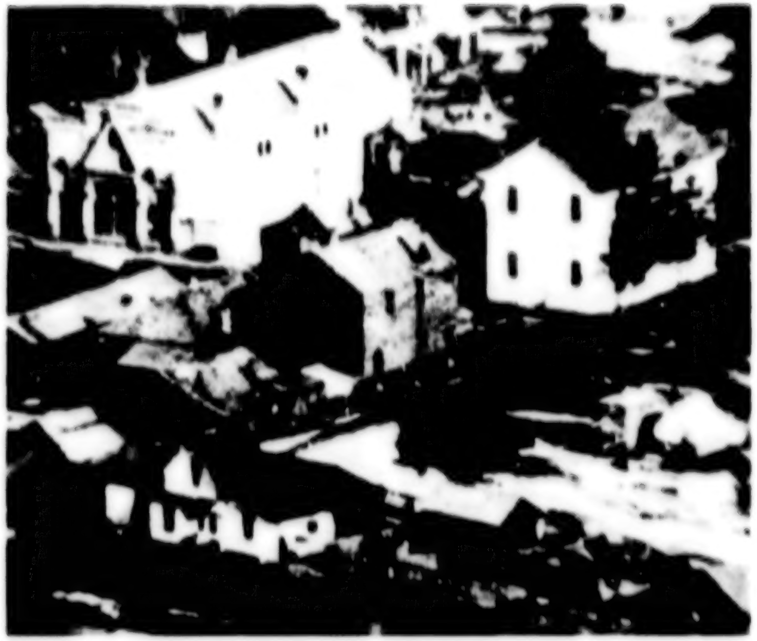


Figure 3.11: Detail from a circa 1902 photograph. The view is looking northeast towards the Elk's Hall.

In this photograph, the Elk's Hall is visible in the upper left hand corner. The Peniel Mission, in the center of the photograph, appears to be unpainted. Note the structures immediately south of the Peniel Mission.

Photo Credits: On file at Klondike Gold Rush NHP.

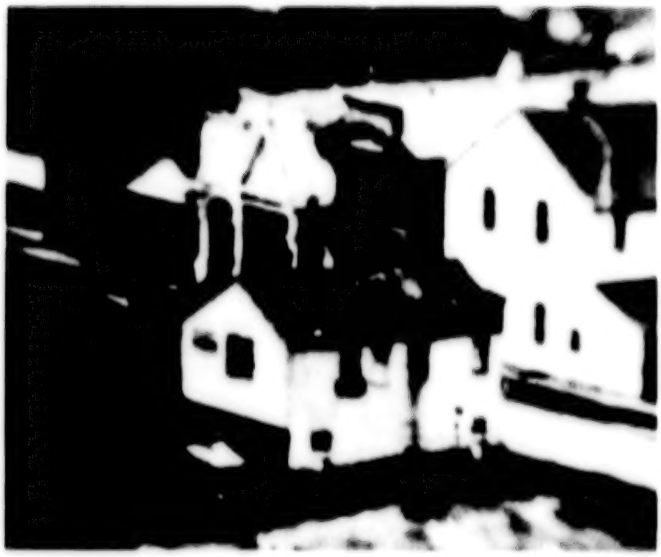


Figure 3.12: Detail from a post-1900 photograph of Skagway. View looking northeast at the Peniel Mission.

In this view of the Peniel Mission, it appears to have been newly painted.

Photo Credits: On file at Klondike Gold Rush NHP.

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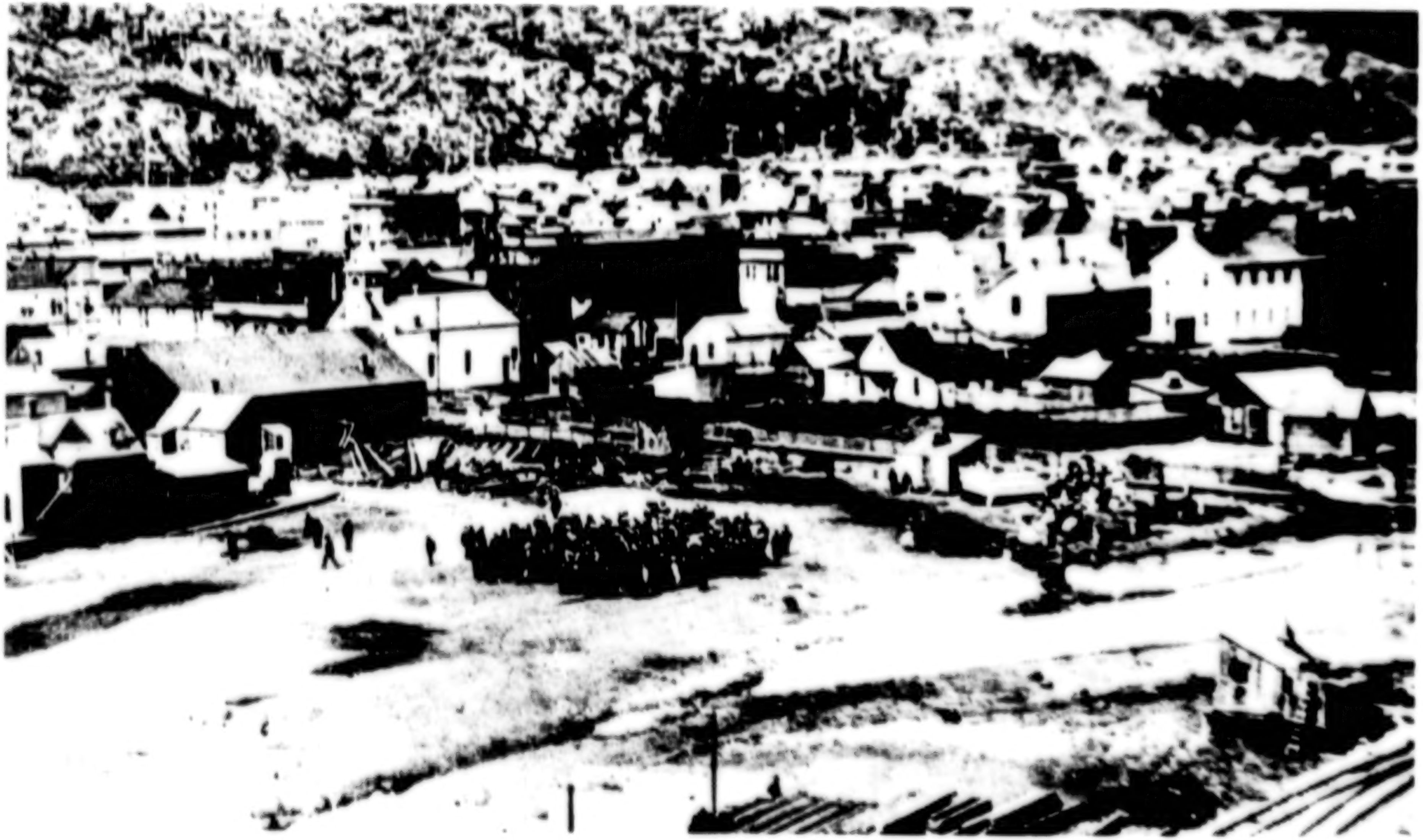

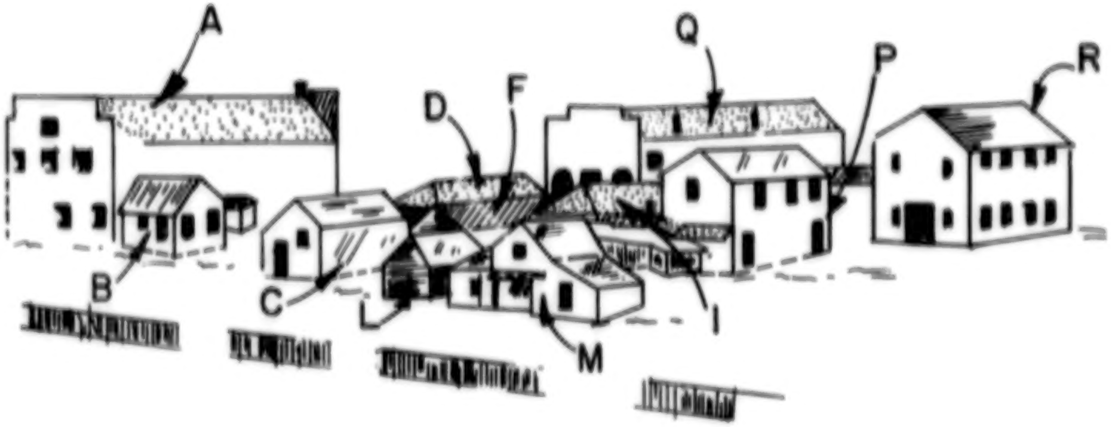

Figure 3.13: Bird's eye view of Skagway, Alaska, about 1903. View northwest across the baseball field towards block 24.

This photograph also shows the changes in the orientation of structure B. Note that two small structures now occupy the area between the Catholic Church and the Moore residence and cabin.

Photo Credits: Enlarged detail from photograph on file, Seattle Historical Society, Alaska Towns, 12,737. (No. SO-6-743-C-14).

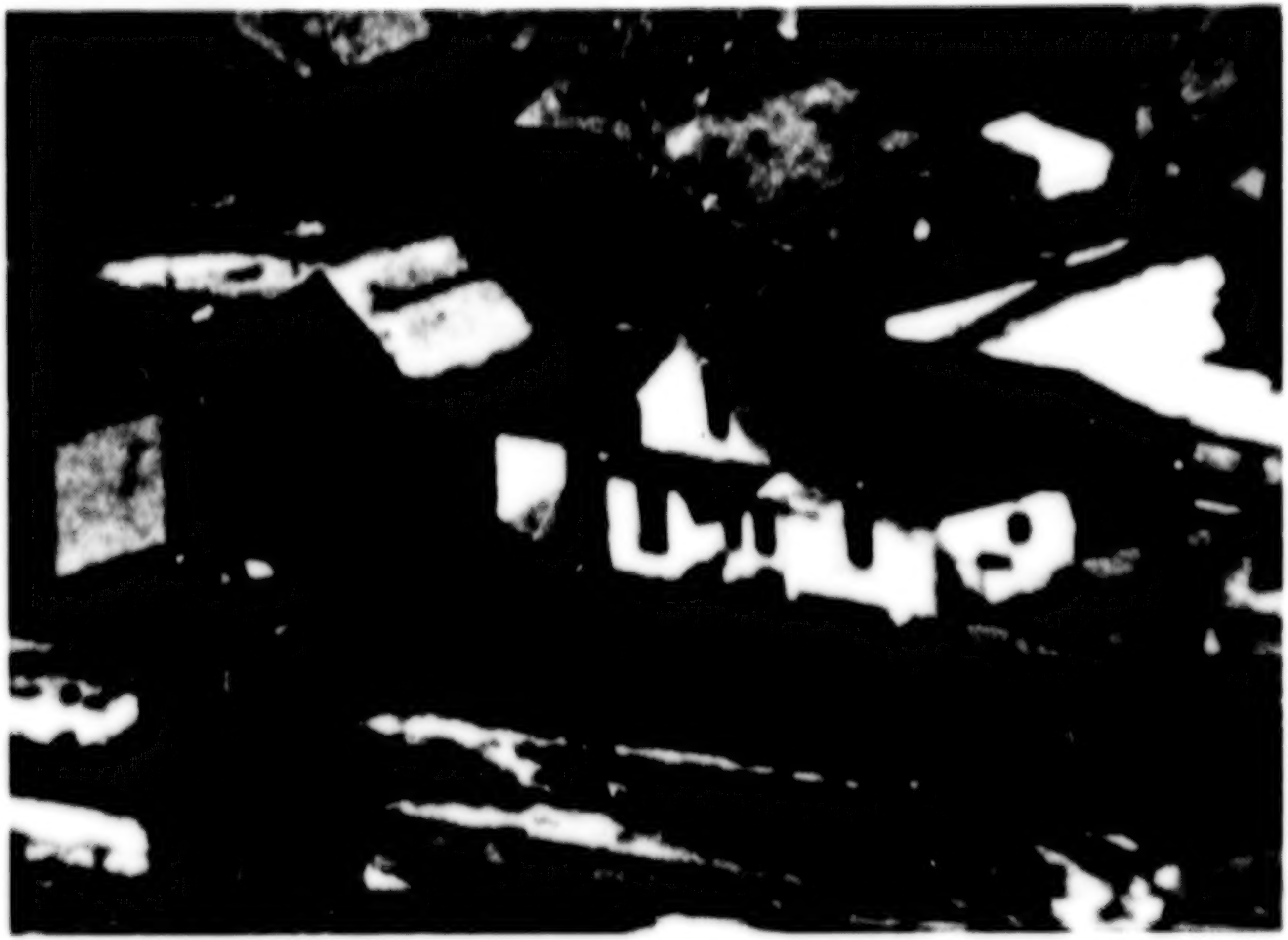

Figure 3.14: View of Moore house and adjacent structures, looking northwest.

Photo credits: Detail from photograph on file at Klondike Gold Rush NHP.

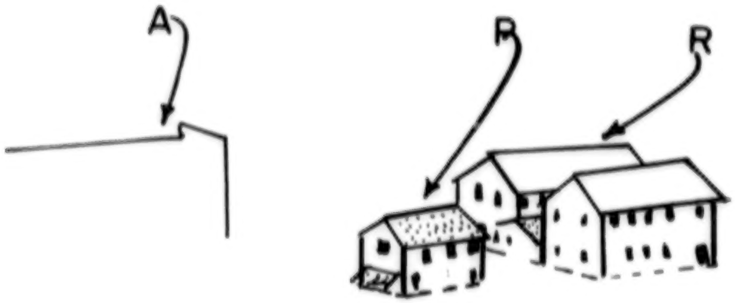

Figure 3.15: View of Skagway, looking northwest towards the Skagway River.

In this undated photograph, the Astoria Hotel and most of the adjacent Sixth Street structures are still present, suggesting that the shot was taken between 1900 and about 1903. Note that another large, white structure has been built across the street from the Peniel Mission, beside the Army barracks. These two structures were moved to Broadway in circa 1907 to become the Lynch and Kennedy building.

Photo Credits: Enlargement from photograph in KLGR park files. (No. SO-59-1107-B-13).

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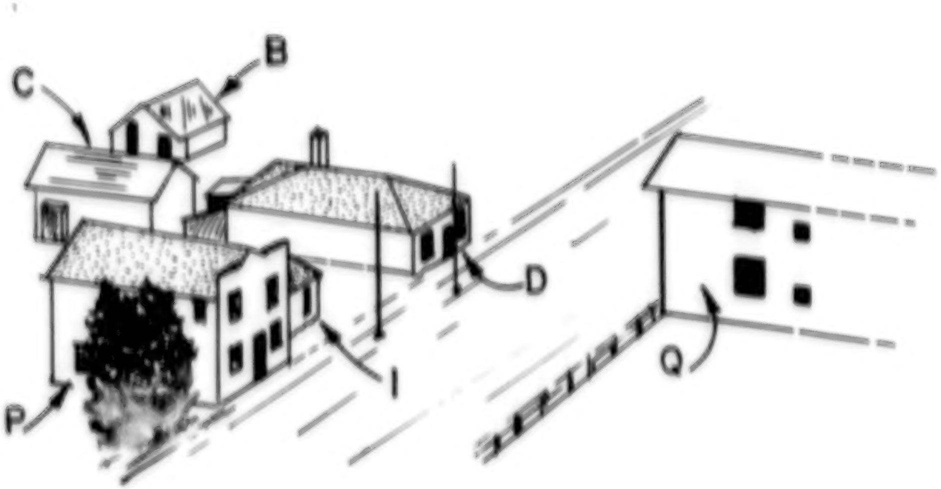

Figure 3.16: View of the Peniel Mission and environs, looking southwest.

This undated photograph shows Sixth Street after the Astoria Hotel was torn down. Buildings B, C, D, I, and a scatter of small sheds and lean-tos are still present. Note the addition of the parsonage on the south side of the block next to the Catholic Church, and the structure(s) south of the Peniel Mission. The two barracks have been moved to Broadway. Photograph probably taken between 1908 and 1910.

Photo Credits: Enlarged from photograph in 10 Fuller Collection, Archives, University of Alaska, Fairbanks. (No. 70-58-102).

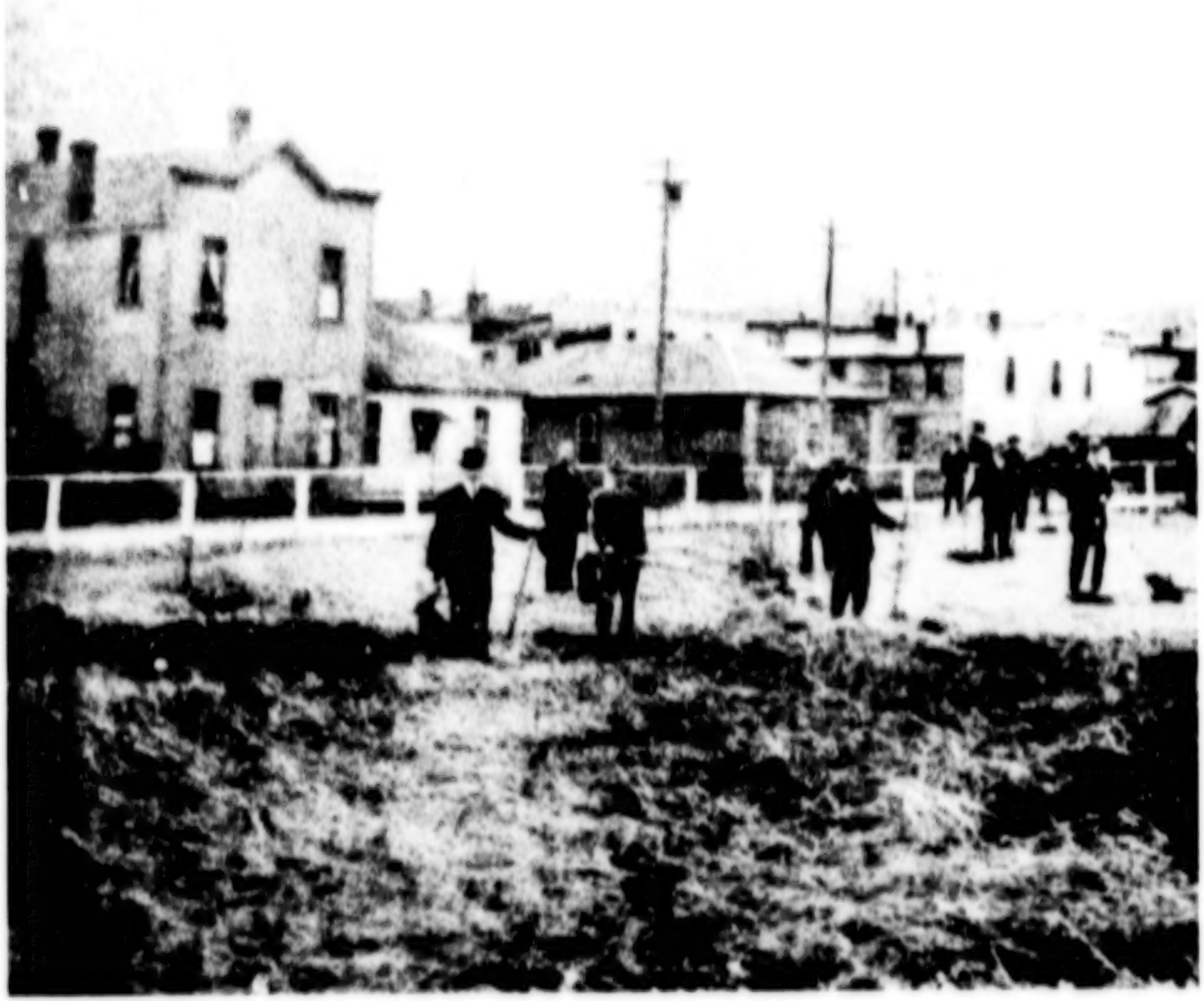

Figure 3.17: View of the Peniel Mission, looking southwest from Elk's Park, 1910.

This photograph was taken on Arbor Day, May 19, 1910. Buildings D and I are still in place west of the false-fronted Peniel Mission at far left center.

Photo Credits: Enlarged from photograph in Klondike Gold Rush NHP files.

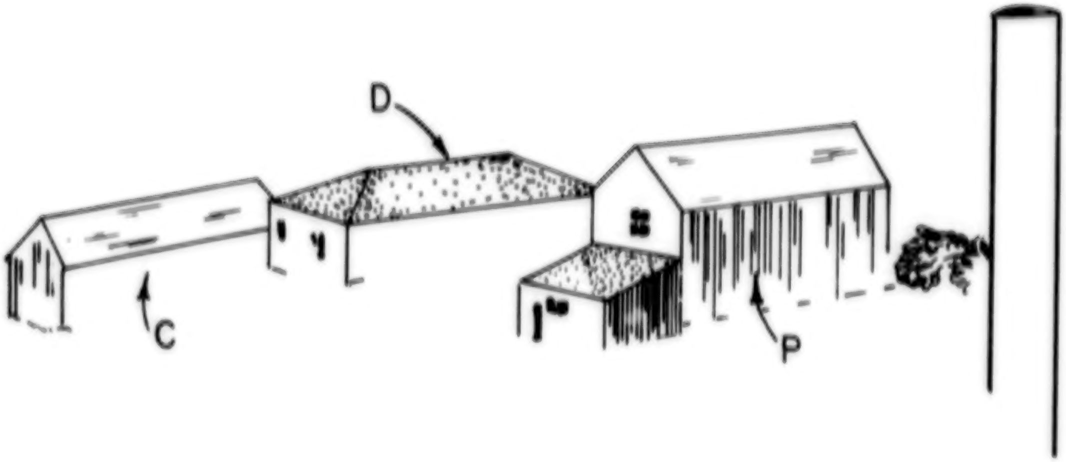

Figure 3.18: View of Peniel Mission area looking northwest, between circa 190 1912. Note that in this photograph, buildings B and I have been removed.

Photo Credits: Alaska Historical Library

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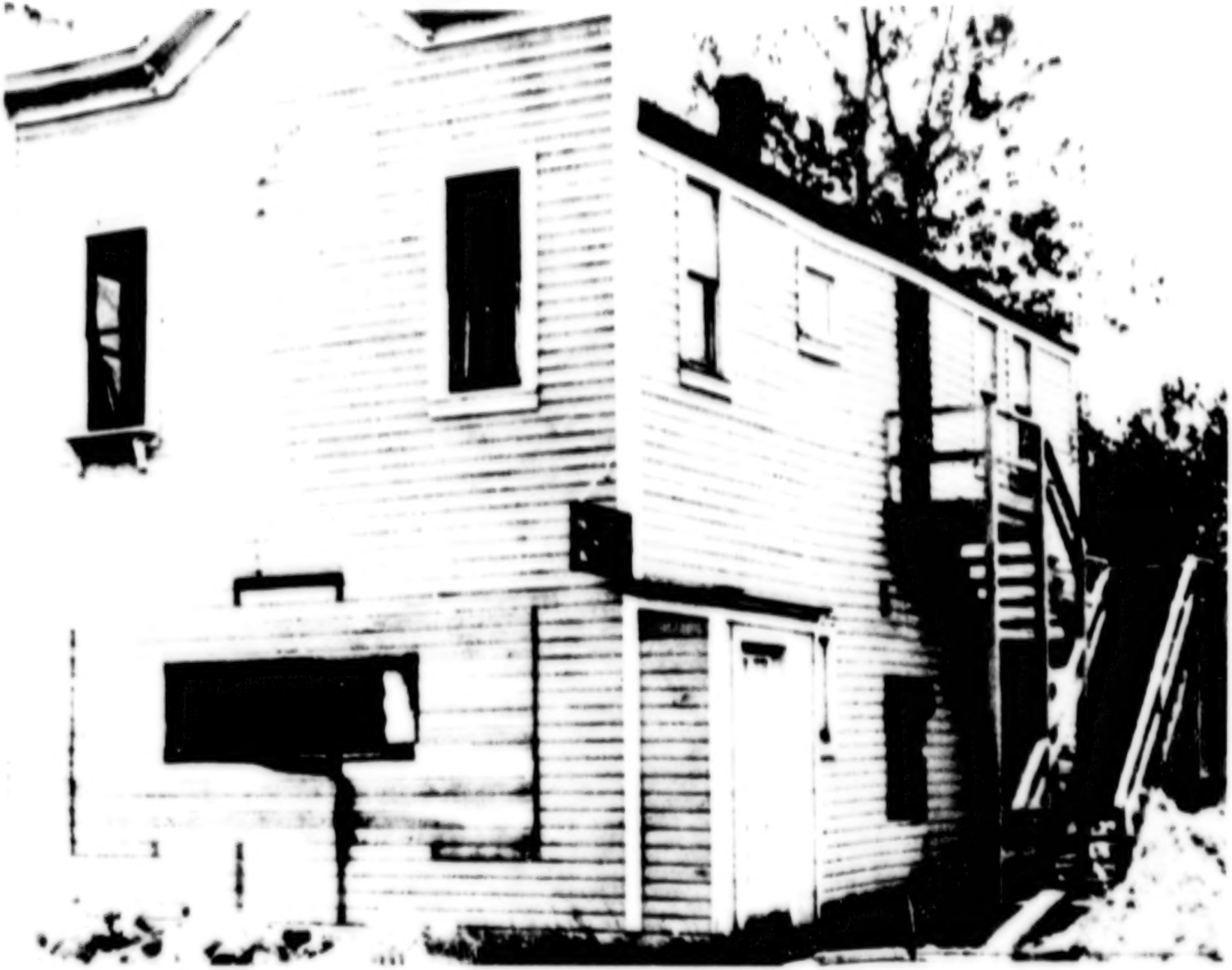

Figure 3.19: Looking southeast at the Peniel Mission during remodeling, circa 1937.

Photo Credits: Photograph on file at Klondike Gold Rush NHP.

Klondike River.[1] Soon renamed Bonanza Creek, the diggings quickly attracted scores of local prospectors. By the end of August, all of Bonanza Creek had been staked, and as winter set in, "gold-crazed men" poured into the diggings. Through the long, harsh winter the "near-starved, scurvy-ridden prospectors" built fires to thaw the ground to reach the gold below (USDOI 1974:16). When the ice broke on the Yukon River in mid-May, 1897, hundreds of prospectors who had spent the winter further west poured into the area to stake claims on the Klondike. Within six weeks, steamers bearing miners and gold reached Seattle and San Francisco. Shortly thereafter, the port cities of California, Washington, Oregon, and British Columbia "were beseiged by gold-hungry hordes heading north" (Ibid. 1974:17). The Klondike Gold Rush had begun.

Prospective miners had the choice of several routes into the Klondike; some went overland across Canada, others took the long sea voyage and land route that led inland from the mouth of the Yukon River. The most popular route was by ship from the ports of California, Oregon, Washington, and British Columbia up the Inland Passage to the 15-mile long deepwater Taiya Inlet, off-loading at either the Skagway or Taiya River inlets. In the two decades preceding the Yukon gold rush, a number of individual prospectors and explorers had taken this shorter route to the Klondike via either the Chilkoot or White Pass trails.

Beginning at Dyea, the Chilkoot Trail crossed 32 miles of extremely rugged terrain before dropping down to the Canadian wilderness lakes and a water route to the Yukon gold fields (Figure 3.20). The White Pass Trail began in Skagway. This trail followed a wagon road along the

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[1] The Klondike River is part of the Yukon River system in northwestern Canada. Although Russian fur traders and explorers, the Hudson's Bay Company, and a few hardy miners had penetrated into the Yukon River drainage by the 1870s, the mighty Yukon "was nearly unknown to the public until 1897" when the gold strikes on the Klondike made it newsworthy (Bearss 1970:1).

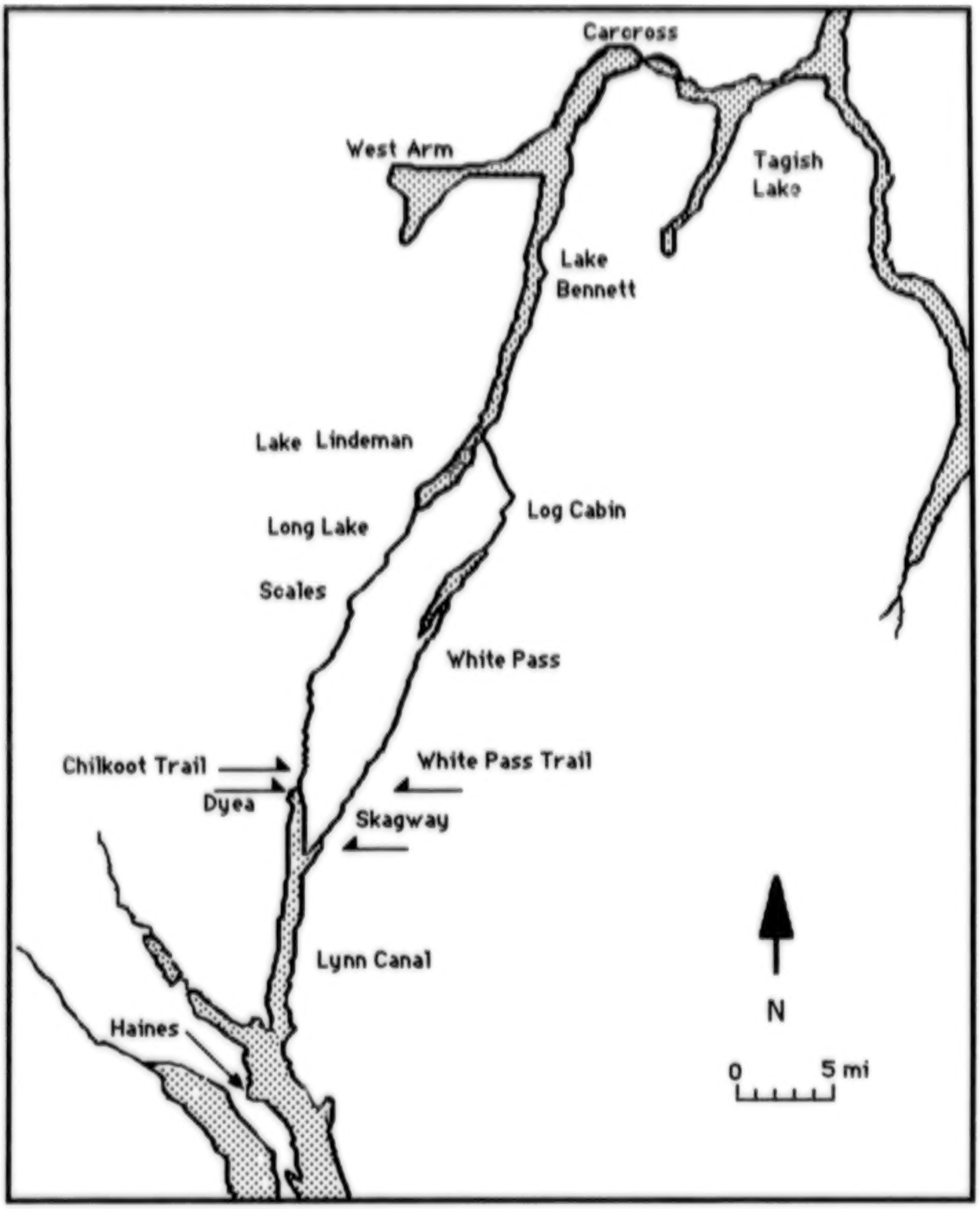

Figure 3.20: Routes of Chilkoot and White Pass Trails to the Klondike.

Adapted from Gordon Bennett, Yukon Transportation (Ottawa, Parks Canada, 1978) p. 31.

Skagway River flats, then wound upward through awesome boulder-strewn terrain, over streams, mudholes, swamps, and steep hills. Once in Canada, the White Pass Trail joined the Chilkoot Trail near Lake Lindeman (Figure 3.20).

Captain Moore Establishes a Homestead. A few farsighted individuals had anticipated the stampede. In 1886 the Healy and Wilson trading post was established on the Dyea flats near a Chilkat Indian village on the Taiya River. Also anticipating the gold rush, and hoping to profit from his strategic location, Captain William Moore homesteaded 160 acres near the Skagway River inlet to the Lynn Canal. Moore described the Skagway River valley as "thickly covered with spruce, hemlock, cottonwood, pine, and birch . . . [with] many beautiful little park-like areas . . . the ground was seamed with little gullies from three to four feet deep. . . ." (Moore 1968:15).

Captain Moore's 160 acres of land reached "from ordinary high tidemark back up along the high bluff on the east side of the bay and toward the Skagway River" (Moore 1968:115). Moore and his son Bernard built a 16-foot square cabin on a raised area adjacent to a small creek on the east side of the narrow river valley. They also built a wharf on the tidal mud flats. The Moores added a small log stable and a lean-to blacksmith shop to the homestead in 1896, and built a 16- by 25-foot frame house near the cabin in 1896 (Moore 1968:179-180). By 1895 Bernard Moore was assisting prospectors over the White Pass trail. When the news of gold discoveries in the Canadian Yukon was received in the United States in 1897, the Moores were ready for the stampede.

When the gold rush began, advocates of the Chilkoot and White Pass routes competed for the sure profits to be made from the gold seekers. Most of the first wave of newcomers landed at Dyea because the Chilkoot Pass Trail was the best publicized route. Captain Moore visualized a trail and wagon road--and eventually a railroad--stretching over White Pass to the gold fields to the north. Accordingly, Moore continued to improve his homestead, erected a small sawmill and "in May and June [1897], while thousands were crossing Chilkoot Pass, he organized a company and hired a crew to open a trail up the west side of the Skagway to the summit of White Pass" (Bearss 1970:77). Although a few miles longer than the Chilkoot Pass route, the lower White Pass trail would allow hand sleighs to travel during the winter and early spring over "ice and snow up through the canyons and chain of small lakes on this side of the Summit" to reach Canada (Moore 1968:90).

By July 1897 Moore, who had built similar roads in the Stikine country, had blazed a trail to the summit of White Pass (Spude 1983:40). Promoters touted the White Pass route; boasting "that pack animals would encounter no difficulty in crossing from tidewater to Lake Bennett" (Bearss 1970:88). Unfortunately this statement was somewhat exaggerated; the trail was unfinished, and was barely passable by foot, much less by pack horses. The fourth week of July Moore met the second wave of Klondikers near Dyea, and persuaded them to disembark at his wharf at "Mooresville." Within a short time, "thousands of adventurers stormed ashore" bringing tons of provisions; a boom town was created overnight on the mud flats at the head of the Lynn Canal (Bearss 1970:77).

Skagway is Formed. Unfortunately for Moore, the gold-hungry miners ignored his homestead boundaries. Trees were cut, buildings and tents erected, and by August 7, the newcomers had taken over most of the area, which they renamed Skaguay (Skagway). A town meeting was called and a government organized. By August 9 more than 1,100 town lots measuring 100 by 50 feet in size had been sold. The streets were surveyed and laid out by city surveyor Frank Reid atop the 160-acre Moore homestead.[2] Within a month the tents and buildings so quickly erected along the White Pass trail had been shifted to clear Broadway, and the city began to take shape.

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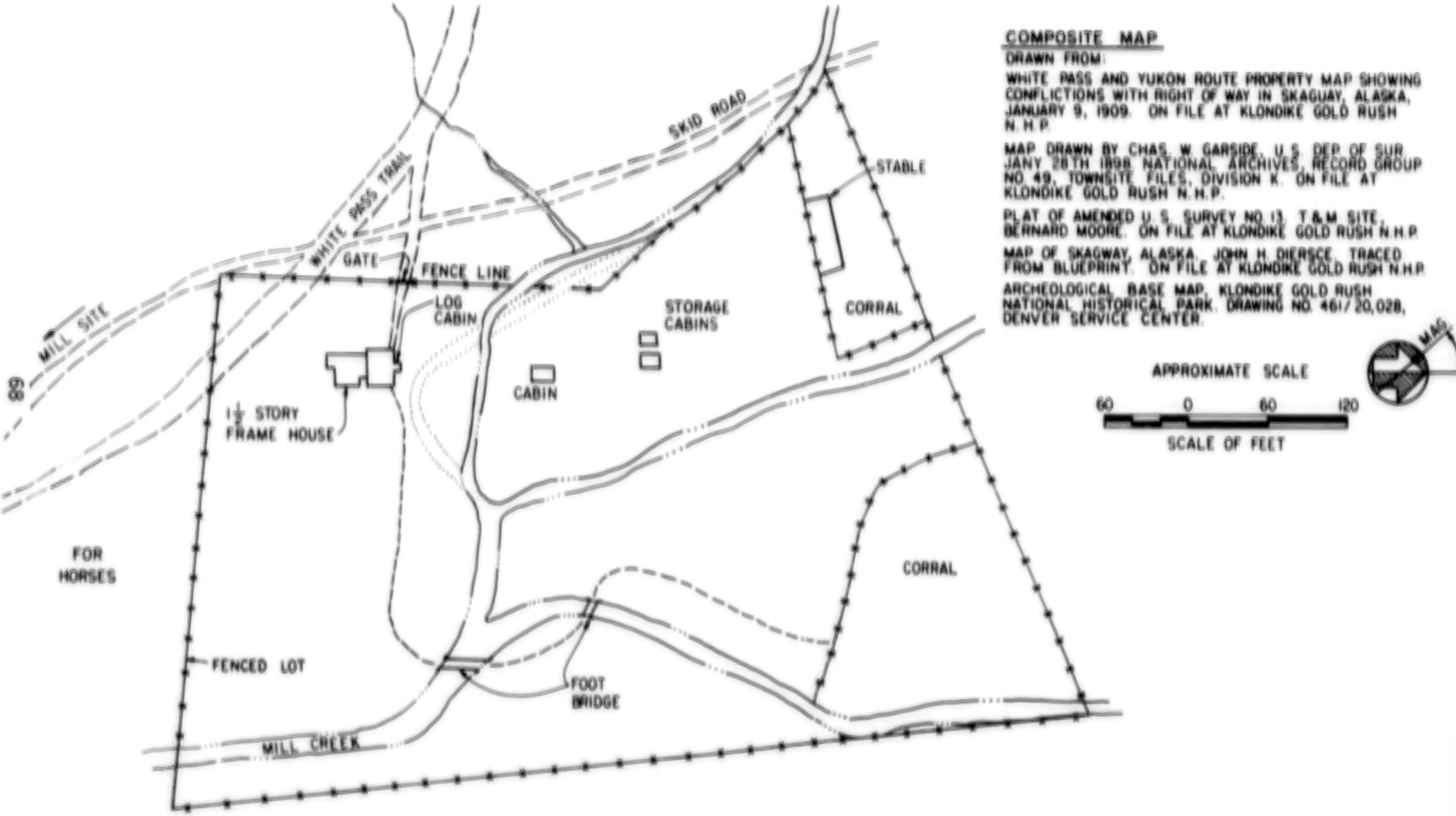
[2] Broadway measured 80 feet wide, and the other streets 20 feet narrower. Each 220 foot by 300 foot city block had 12 lots; 20 foot wide alleys ran the length of the block.



COMPOSITE MAP

DRAWN FROM:

WHITE PASS AND YUKON ROUTE PROPERTY MAP SHOWING CONFLICTIONS WITH RIGHT OF WAY IN SKAGUAY, ALASKA, JANUARY 9, 1909. ON FILE AT KLONDIKE GOLD RUSH N.H.P.

MAP DRAWN BY CHAS. W. GARSIDE, U.S. DEP. OF SUR. JANY 28TH 1898. NATIONAL ARCHIVES, RECORD GROUP NO. 49, TOWNSITE FILES, DIVISION K. ON FILE AT KLONDIKE GOLD RUSH N.H.P.

PLAT OF AMENDED U.S. SURVEY NO.13, T.&M. SITE, BERNARD MOORE. ON FILE AT KLONDIKE GOLD RUSH N.H.P.

MAP OF SKAGWAY, ALASKA. JOHN H. DIERSCE. TRACED FROM BLUEPRINT. ON FILE AT KLONDIKE GOLD RUSH N.H.P.

ARCHEOLOGICAL BASE MAP, KLONDIKE GOLD RUSH NATIONAL HISTORICAL PARK. DRAWING NO. 461/20,028, DENVER SERVICE CENTER.

Figure 3.21: Plan view of Captain Moore's Lot, Fall 1897.

Two large tracts of undeveloped land east of Broadway, a total of 5 acres, were set aside for Moore's homestead and sawmill (Figure 3.21; Spude 1983:40). The Moore homestead was eventually transferred to the Alaskan and Northwest Territories Trading Company who supported Moore when he sued the trespassors for redress.[3] Four years later the trading company was awarded 25 percent of the assessed value of the improvements built on Moore's original homestead. In the meanwhile, William Moore purchased a plot of land for another cabin, and "relocated and extended his wharf out across the tidal flat to deep water" (Bearss 1970:79).

Border Disputes

By the fall of 1897, it was apparent that the stampeders were facing a number of critical problems. Border disputes between Canada and the United States dated to the cloudy provisions of the 1825 Convention between Russia and Great Britain which established the boundaries of Alaska. Both sides challenged the boundary along the Coast Mountains--the British claiming the "head of the Lynn Canal and the Taiya estuary. The Americans disagreed . . .", and the Canadians sent inspectors into the Skagway area to establish the 'true' boundaries, and to guard the passes (Satterfield 1978:13, 113). Tension between the two nations had been escalated by several unannounced American expeditions into Canadian territory. Fearing that thousands of inexperienced, ill-equipped stampeders would be stranded in Canadian territory during the long, harsh winter, the Northwest Mounted Police established posts at the access points into Canada in mid-February 1898. The Canadians collected customs and required each miner entering the Territory to bring a year's supply of food and goods--roughly 1,500 pounds of food, plus 400 pounds of gear.

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[3] This was the company that originally put up the capital for Moore to build the wharves and trail.

By September of 1897, the massive influx of cheechakos (newcomers) was more than the White Pass trail could handle. The roughed-in, unfinished trail was already in use before the Alaskan Northwestern Territories Trading Company had obtained rights-of-way or the franchise to levy tolls. Unfortunately the Secretary of the Interior denied the Company's August 7, 1897 request to levy tolls, warning them that such rights had to be approved by Congress. Unable to expend further funds on the trail, the Company was forced to postpone further work. Goods and people began to stack up in Skagway. Tons of goods, hundreds of horses and mules, and a few oxen and goats had been unloaded from incoming steamers. Men and women, pack animals, and vehicles--ranging from wagons to two-wheeled carts and sleds--clogged the streets (Bearss 1970:86). Many of the horses had been slated for butchering in West Coast canneries, and were in poor condition. When their inexperienced handlers tried to force the animals over the rough White Pass trail, thousands were killed or had to be destroyed. Miners backtracking along the trail to pick up goods cached earlier clogged the narrow passageway, and the first ten miles of trail soon became a quagmire of mud and horses and men and goods. Despite attempts to build a corduroy road and fill in some of the holes, traffic on the trail was "moving at a snail's pace" by August 9. Within three weeks, all movement had come to "a standstill," and heavy rains ruined cached provisions (Bearss 1970:90, 92). Stampeders arriving on the daily steamers waited around in Skagway, hoping the trail would clear.[4] Winter was coming on in the Alaskan/Canadian high country, and many stampeders opted to winter in Skagway to "wait for spring and the opening of the promised wagon road across the Coast Mountains" (Bearss 1970:93).

The Growth of Skagway. As a result, growth of this little town on the Lynn Canal accelerated at an alarming rate. By October 1897, the 3,000 residents had built "about 40 wooden buildings, in addition to hundreds of tents (Bearss 1970:93);" there were brothels, dance halls,

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[4] Movement over the Chilkoot Trail was more efficient, and fewer prospectors stayed on in Dyea.

"15 general merchandise stores, 19 restaurants, 4 meat markets . . . 6 lumber yards, 8 pack trains, 6 lawyers" (Spude 1983:6), ". . . 35 restaurants, ten to 12 hotels, and numerous saloons and gambling dens" (Bearss 1970:93). Three more wharfs were soon underway to join Captain Moore's relocated and expanded facility. Skagway was an "instant city" offering almost all the luxuries of home (Spude 1983:41).

This overnight city quickly attracted a number of "outrageously lawless" individuals who were at first "held in check by miners' committees that had been constituted and delegated authority to mete out summary punishment" (Bearss 1970:95,86). Miners' courts dealt with illegal filing fees, with disputes over the sale and resale of improperly recorded city lots in Skagway, and with theft from miners' caches along the trails. By the beginning of 1898, it was apparent that the miners' courts were unable to cope with the "gamblers, thugs, and lewd women from the worst quarters of the cities of the Coast" (Bearss 1970:187). The town had "little to offer in the way of social graces. It was known as a hell hole . . . [with] gunfire at all hours of the day and night. . . ." (Satterfield 1978:69). In February Deputy Marshal Rowan and a laborer named Andy McGrath were killed in the People's Theater in Skagway. It was apparent that Skagway needed more law and order than that provided by the various ad hoc local groups. The situation prompted local road builder George A. Brackett to contact Senator C.K. Davis and request military intervention.

The Army Comes to Skagway. The U.S. Government responded with four companies of the 14th Infantry who had been stationed at Vancouver Barracks, Washington. The first troops, equipped for field service, arrived in Alaska on February 25, 1898. Companies B and H, under the command of Colonel Thomas M. Anderson, were billeted at Dyea; companies A and G, commanded by Captain Frank F. Eastman, were stationed at Skagway.

The camp site chosen at Skagway was between Main Street and the Skagway River, "one and one-half miles from the landing" (Bearss

1970:158). Location of the camp was carefully chosen since the poor sanitary condition of the town was blamed for a number of deaths.[5] Arctic portable houses acquired in Portland were "floored, braced, and strengthened" to provide facilities for the soldiers (Bearss 1970:164).

The presence of the American troops--the counterpart of the Canadian Mounties--was intended to help keep the peace among the miners as well as prevent a major confrontation between the Mounties and local volunteer militia who intended to "drive the Mounties down from their nests on the summits" (Satterfield 1978:139). The continuing Canadian/American disputes were centered on boundary claims and unproven allegations that the Canadians were illegally levying tolls on miners' goods, importing liquor, and cutting timber on Alaskan lands.

Colonel Anderson proved to be a calm and effective commander, and 1898 passed without military incident between the Americans and the Canadians. Although there was a brief encounter with recalcitrant longshoremen at Skagway upon the arrival of the troops, and a minor incident involving the captain of the steamer Cottage City, there was little for the troops to do in their first two months in the District of the Lynn Canal.

With the beginning of the Spanish American War in April, "war fever . . . gripped the area," and the regulars were eager to go (Bearss 1970:164). In May, 1898 three of the companies were recalled from the area, leaving only Company B of the 14th Infantry at Dyea under the command of Captain R.T. Yeatman. The camp at Skagway was closed, and all forage, commissary, transportation stores and portable buildings not needed for the three companies on board ship were moved to Dyea. On December 31, 1898, a permanent reservation was established on the Taiya Inlet, and buildings were rented from the Dyea-Klondike Transportation Company for use of Company B.

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[5] One of the soldiers stationed at Skagway died from spinal meningitis in the spring of 1898 (Bearss 1970:163).

It is just as well that Company B was left behind in Alaska. Over the next few months the soldiers helped to settle labor disputes and maintain order on the Brackett Wagon Road.[6] They intervened in incidents on the Dalton Trail and at Skagway. Much has been written about the exploits of Soapy Smith, and it is appropriate here only to mention that in March, 1898, the vigilantee "Committee of 101" was formed in response to the depredations of Soapy's gang. Following the July, 1898 gun battle in which town surveyor and committee member Frank Reid, and saloon owner Soapy Smith were both killed, the presence of the army helped prevent mob rule and further violence in Skagway.

In early May, 1898, Judge C.A. Sehlbrede replaced U.S. Commissioner John U. Smith. This helped put an end to the many shady deals and to the illegal charges levied by Smith, a judge who had become the city recorder immediately after Skagway was laid out. It is obvious that Smith was "more interested in making money than in maintaining law and order" (Bearss 1970:181).

The Railroad is Built. During the winter of 1897-1898 competition between the boom towns of Skagway and Dyea had continued unabated. Tramways were built on the Chilkoot Trail in the spring of 1898 to allow the trail to compete with the newly opened Brackett Road--a freighting and packing route that led from Skagway to White Pass City. Ground was broken in Skagway for Alaska's first railroad on May 27, 1898. Within two and a half weeks, work on a track down Broadway had begun, and a new depot was completed early in 1899. Despite incredibly difficult working conditions, labor problems, and desertions by crews who abandoned the railroad for newly opened gold fields (Bearss 1970:253), the first train to the summit of White Pass ran on February 16, 1899; the line was completed to Bennett early in July. In slightly over a year the line reached to Whitehorse, Yukon Territory. The infantry helped

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[6] The Brackett wagon road, built between October 1897 and April 1898, was one of three routes over White Pass; the White Pass Trail and the railroad were the others.

"maintain order in labor disputes" during construction of the railroad (Cohen 1986:102).

With the building of the railroad, Skagway surged far ahead in its race with Dyea. The railway ended all need for the agonizing journey over the Chilkoot trail, and the deep water port at Skagway was far better suited for large steamers than the shallower waters of the Taiya Inlet. The tramway over the Chilkoot Trail/Pass was purchased and dismantled by the railroad.

Skagway Grows. During 1898, Skagway began the transition from temporary boom town to a permanent city which served not only as the stampeders' gateway to the Klondike, but as a major staging point for transshipment of goods. During the fall and winter of 1897-1898, a post office was established and city elections held. By December the Union Church had been dedicated. In January, 1899, eighty illegal (unlicensed) saloons were fined $100 each; several were forced to close. On the 1st of July, a new $1,500 license law closed all but ten of the remaining saloons.

In May, construction was begun on McCabe College, the Baptist Church, and the Arctic Brotherhood Hall. By this time most of Skagway's buildings had been "tastefully painted, and the city had a very business-like appearance" (Bearss 1970:244). Houses and stores stretched along miles of streets and boardwalks in this 14-month-old city. Skagway boasted of several newspapers, churches, sawmills, and wharves. Most of the necessary public utilities were in place or under construction, including a water system, electrical and telephone lines, and a fire station.

During this time, the city council voted to use street numbers instead of names; Holly Street became Sixth Avenue, and McKinney was changed to Fifth (Spude 1983:7). Most of the two- and three-story hotels were along Fourth Avenue, "while Fifth and Sixth avenues were a hodgepodge of stores, saloons, and offices; dives and the red light district were found in the alleys between" (Spude 1983:41).

Skagway Settles Down. By the middle of 1899, Skagway's boom had lost its frenetic quality. There were fewer new businesses, and existing merchants began to enlarge and embellish their stores, and build new homes. Bernard Moore's frame home was expanded in 1898 and 1899. A year later the old cabin was moved 50 feet west so a rear addition could be put on the house (Spude 1983:159). Captain Moore began building a mansion on his property at the east end of Sixth Avenue (Spude 1983:24).

Tourism Begins. By 1899, increasing numbers of tourists were joining the throngs of stampeders arriving on the daily steamers. Distinguished visitors such as John D. Rockefeller and a party of eight visiting congressmen included Skagway on their grand tour of Alaska (Daily Alaskan 1 January 1900:14).

The Army at Dyea. In May, 1899, Company L of the 24th Infantry, composed of 106 enlisted men commanded by Captain Henry W. Hovey, replaced Company B in Dyea, and took over the peace keeping duties. Dyea was by now well on its way to becoming a ghost town (Daily Alaskan 16 May 1899:1). The 24th United States Infantry was "one of the four black regular army units in existence. It had a distinguished record since its formation in 1869" (Satterfield 1978:143). Soldiers of the 24th Infantry had fought Indians in the West, participated in the Spanish-American War, and lost 300 of its 500 officers and men to "battle and fever" in Santiago (Bearss 1970:173). Company L was a new company that included twelve men who were with the regiment prior to the Spanish-American War.

The Army on 6th Avenue. On July 28, 1899, the soldiers of Company L were forced to flee their Dyea camp in the face of an intense forest fire. Three boatloads of Army property were moved across Taiya Inlet to Skagway before the fire consumed the camp and the remaining gear. The unit rented a warehouse in Skagway, and set up temporary camp at Moore's Park on "property belonging to Captain Moore . . . who let them live there free of charge" (Satterfield 1978:144). The soldiers pitched tents and installed flooring in the canvas shelters. By September

15th the troops were moved into the Astoria Hotel, "a good place for barracks" (Hovey 1899b).[6]

The Astoria Hotel, built in the spring of 1898, was also situated on the same block as the later Peniel Mission. The hotel was was used by the Army for several years (see building A, Figures 3.2 through 3.4). The military also leased a number of structures in Skagway, including two small gable-roofed wooden buildings behind the hotel which they converted into a kitchen and coal shed respectively (see buildings B and C in Figures 3.2 et seq.). A latrine was added to the hotel complex, and another building on the south side of 6th Avenue (the location unspecified) was leased for officers' housing. The Army's modifications to the area also included installation of water and sewer lines and a cess pool. The sewage from the Astoria was drained into nearby mill creek, now known as Pullen Creek.

The Army also stabled their mule teams somewhere in this area. A news item in the September 6, 1899 Daily Alaskan (page 2) notes that "Captain Hovey has donated the use of a fine mule team . . ." to assist in the gravelling of Fifth Avenue for 200 feet east of Broadway. At first the team was stabled in a hired room near the barracks at a cost of $6 a month. However, this soon became "annoying and detrimental to the service as animals belonging to civilians were often stabled in the same building". A stable and a wagon shed of "sufficient dimensions to house the [Army] wagons, sleighs, [forage], water tank and light spring wagon" were rented from J. Bernard Moore (Jenks 1900). These buildings were located "near the bluff, east of Broadway, Skagway" (Jenks and Moore 1901). The mules were "watered from a creek near by [presumably Mill Creek] into which several sewerage drains empty, causing the water to become foul and unfit for any purpose" (Chappelear 1902). Connection to the city water was sought as a remedy for this unhealthy situation.

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[6] The Astoria Hotel and Company L are relevant to this report because the Peniel Mission excavations took place adjacent to the previous location of the Astoria, and several military items were found in the excavations.

A detailed discussion of the various buildings leased by the Army is included in Appendix C. Military activities which *may* have some relationship to the artifacts found during the Peniel excavations are also discussed in this appendix.

The only other identifiable Gold Rush period building located in the site vicinity along the south side of Sixth Street, was the Colorado Lodging House (probably building F in Figure 3.1). A contemporary newspaper ad describes this establishment as follows:

> Colorado Lodging House / 6th Ave (Holly) *Two doors below Astoria Hotel*/ The Nicest . . . Cleanest . . . and Most Quiet Lodging House in the City / Parties compelled to be up during the night [will find? want a?] quiet place to recuperate / Rooms by the week $2.00 / C. [?] M. Dougan, PROP. (*Skaguay News* 17 June 1898:1); [emphasis added].

Skagway as a Transportation Hub. As the Gold Rush waned, many of the boom towns were abandoned almost as fast as they had sprung from the wilderness. Skagway survived the initial stampede because by 1900 it had become an important cog in the transportation network connecting the west coast port cities of Canada and the United States with the Yukon. Goods and people landed in Skagway were transshipped to other areas over the newly completed railroad. By 1901 Skagway had nearly completed its metamorphosis from boom town to a railroad and tourist center. Thus begins the second chapter in the story of Captain Moore's homestead, and the land which eventually became part of Klondike Gold Rush National Historical Park.

Moore's Claim on Mill Creek. Captain Moore's claim was bisected by Mill Creek, and one branch of the creek defined a portion of the west property line (Figures 3.2, 3.4, and 3.21). It is evident from the soil strata uncovered in the 1983-1985 excavations that the creek was used as a dump. At that time it was common practice to dump debris and garbage in stream beds. The west bank of the stream that defined Moore's property would have provided a convenient place to dump garbage, and the dumping may have offered some measure of erosion control, protecting the area near the cabin from erosion.

As shown by the photographic record, it appears that the westernmost branch of the creek was filled and the dump was covered sometime between August, 1897 and fall, 1900. This sequence of events can be traced in Figures 3.1 through 3.5, and 3.7-3.8. At first (1898) the bend of the stream behind the Moore cabin and along the Moore fence line is well defined and the majority of the water appears to be flowing in the westernmost channel of the stream (Figures 3.1 through 3.4). Within a year the main channel appears to have shifted to the east (Figure 3.5). By the summer of 1900, the old stream bed is barely visible, the Moore cabin has been moved, and a boardwalk appears along the west fenceline (Figure 3.7). Within a few months, the Peniel Mission occupied the northwest corner of Moore's lot (Figures 3.8 through 3.18).

Bernard Moore's diary mentions that

> this creek [Mill Creek] is a small branch of a stream that has since been filled but which in those days flowed where the barracks are now built and on around the back of my dwelling (Moore 1968:16).

The Peniel Missionaries

The Peniel missionaries came to Skagway during the gold rush to minister to both the religious and humanitarian needs of the rather transient residents of this boom town. In the 1880s, T.P. Ferguson and his wife Mayne Payne Ferguson had founded the missionary movement, later known as the Peniel Missions, in California. The Fergusons had been influenced by the mid-nineteenth century Holiness Movement, begun by Charles G. Finney. Finney, a famous Congregationalit evangelist of the early 1800s, "had learned of sanctification [holiness or becoming perfect in love] from the Methodists. . ." (Melton 1978:202). At first highly successful, this nineteenth century revival movement was eventually torn by schisms, and by 1890 numerous independent holiness

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7. The barracks were across Sixth Avenue north/northwest of the Peniel Mission (Figure 3.15).

churches had been established. Sometime during the 1880s, the Fergusons had

> experienced sanctification under some holiness evangelists . . . [and] established the Missions. . . . The missions have been marked by intense evangelistic endeavor, spiritual guidance, and stress on sanctification and sinlessness. . . . Worship is spontaneous and Spirit-led (Melton 1978:224).

It should be noted that the Peniel missions were staffed and managed almost exclusively by women.[8] Manie Payne Ferguson and Theodore Ferguson worked together as equal partners to establish the west coast Peniel Missions, and she continued to proselytize and work with the missions following his death in 1921. The name "Peniel" (meaning "Face of God") was chosen by Mrs. Ferguson in 1891 following a personal religious experience.

The Peniel Mission was "thoroughly evangelical but entirely undenominational" (Peniel Herald, October 1894:1:1:1). The first Peniel Missions were evangelistic centers which concentrated on "Gospel meetings, revivals, Bible classes, street meetings . . . and . . . did not give meals or even soup" (Hittson 1975:6). Eventually, as the urban areas around the missions deteriorated and the saloons and billiard halls and "other highways to death" proliferated, the missions became "rescue missions" offering food and lodging for the unfortunate, including unwed mothers and wayward women (Ibid. 1975:8). Dedicated "Peniel girls . . . [went] into saloons and houses of dope and prostitution to take the Gospel to the lost souls there. . ." (Ibid. 1975:1). However the stated policy of the Peniels did not change--the missions were for all kinds of people and all levels of society, on a world-wide basis. In early days the missionaries subsisted solely on free-will offerings; there was no organizational framework within the group to finance operation of the various missions.

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[8] A 1932 list of Peniel Missionaries included seven men and 66 women. Of the men, all but one were husbands of the women pastors and missionaries (Hittson 1975:25).

Founding of the Peniel Mission in Skagway is aptly told in Paul A. Hittson's 1975 history of the group. To quote:

> In the winter of 1898 a Christian man visited Skagway, and told Miss Ulery[9] [who was then in Juneau] about the need for a Gospel mission there. He gave her $20 to "help someone go there." She herself went - it cost $12 for fare on a small boat, so she arrived with $8 to start a mission on (1975:37).

Upon Miss Ulery's arrival in Skagway, she was sent to the Golden North Hotel where she had a room but no meals.[10] She joined forces with a former criminal lawyer named Paulsell, a recent convert. They started holding open air street meetings, as well as services in several of the town's saloons. In June 1899, they rented an old blacksmith shop.[11] This had a canvas roof and some very strong odors left from the other tenants" (Cox 1968:44). Although they cleaned it up, the tent roof leaked badly whenever it rained; 'Showers of Blessings' came upon . . . [them] from the very first service" (Ibid. 1968:44). At this time, Mrs. Yorba, an older lady "who had been converted from Catholicism" was sent to Skagway to take charge of the mission. She brought her teen-age daughter and her sister with her. Mrs. Cox noted that Mrs. Yorba "routed us out of warm beds and down to the mission each morning for seven o'clock prayer, but in spite of the early hour many people attended it" (Cox 1968:44).

The present Peniel Mission is situated on the west half of city lot 2, block 24. The 1983 and 1985 archeological investigations were on the west half of lot 2 and on the portion of the east half of lot 3 that lies

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9. Mabel Ulery was an enthusiastic and dedicated young convert who went to work in the Juneau, Alaska Peniel Mission in September, 1898. She went to Skagway that winter, returning to Juneau in 1900. She later wrote (as Mabel Holmes Cox) about the Alaskan Peniel missions in her book The Lady Pioneer.

10. Miss Ulrey arrived in Skagway wearing a sailor hat with the words "Peniel Mission" printed on the band.

11. Hittson (1975:36) writes that the Peniel Mission was opened in Skaguay on May 16, 1899 with Misses J. Barnett and Kline in charge.

immediately to the west of the Peniel (figure 1.2). These plots were originally part of the land set aside for Captain Moore.[12] Records show that city lot 2 was first located by R.N. Wilson on December 8, 1897. Two weeks later R.E. Ulwer [Ulmer?] also filed notice that he had posted lot 2 and was in "lawful occupation and possession" (Town Lots, Location Book 1:134). When the town site became public domain in the fall of 1897, it was necessary to stake out the property and file a location notice with the United States Commissioner to secure title to the property. Many of the city lots were claimed again and again. Apparently Wilson was the first one to obtain a legal claim on this portion of the property that Moore had originally homesteaded and claimed as his own, and Ulwer's "location" was never pursued further. On November 10 of 1898, Wilson indentured the lot to Theodore Johnson. On April 7, 1900, the property was indentured again; this time from Theodore Johnson to W.P. Ferguson. Construction of the Peniel Mission began shortly thereafter. The Peniels held the property for a decade or more, when it was conveyed to Martin Johnson.

William Bristol located lot 3 of block 24 on August 8, 1897. A couple of weeks later, Eugene C. Ward also located lot 3. Early in 1898, Ward and Robert I. Williams sold the "House and lot [3] on Holly Ave." to J. Cummings for $450. It is probable that the house on lot 3 was built by Ward and/or Williams, and that it was the easternmost hip-roofed structure (building I) shown in Figure 3.7. Judging from tax records, the structure was probably fairly modest.

Cummings indentured the west half of lot 3 to F.F. Frisbee in February 1898; Frisbee deeded the property over to F.T. Keelar (Skagway's "money king") for the sum of $1.00 in August of 1898. Keelar hung onto the property until 1916.

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[12] The legal description of the property and a record of ownership is included as Appendix D.

Following the initial property transfers itemized above, no records were found for the east half of lot 3 until 1916 when the entire lot was acquired by the Territorial Corporation. However, tax records suggest that the Moore Townsite Company owned the east half of lot 3 from sometime around the turn of the century until 1916. Until the resolution of Moore's claims, ownership was based upon occupation, understanding that Moore had filed an adverse claim to the property. When Moore's claim was resolved in September, 1901, he sold quit claim deeds on the properties (Spude 1987). Mr. and Mrs. J. Mercier paid the taxes on the east half of lot 3 until at least 1907, and possibly 1911. They may have been squatters who occupied the hip-roofed structure, building I. However, the Merciers do not appear in any of the Skagway directories, and their occupations and use of the structure remain unknown. Historic photographs and the tax records suggest the hipped roof structure may have been torn down sometime between 1910 and 1911.

Although there are few other written records to document the use of city lots 2 and 3 during the gold rush, historic photographs give several clues to the rapidly changing landscape. Photographs of the area taken January, 1898 show the Moore property and the adjacent landscape (figure 3.1). Within a few months the Astoria Hotel (building A), the adjacent kitchen and coal shed (buildings B and C), and building I, the Ward-Williams house, have been built on the south side of Holly Street, later redesignated Sixth Avenue (Figure 3.2).[13] Structure I closely bordered the west edge of the Moore homestead; the portion of the site which was later to be occupied by the Peniel Mission is clearly shown as part of the fenced Moore holdings in Figure 3.7.[14]

The December 28, 1899 Daily Alaskan (4:4), noted that

> The small building which has stood in the middle of Sixth street a little east of the United States barracks for a long time has

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[13] This designation for buildings B and C is based on building size recorded in lease documents cited earlier.

[14] A short discussion of the buildings along the north side of Sixth Avenue is included in the section on the 24th Infantry, Appendix C.

> been moved to a lot nearby, thus leaving the street open and giving room for the grading of a wide street to Moore's park. The old building is being fitted up for use by the Peniel Mission as a meeting hall.

Ten days later the paper announced that:

> The Peniel Mission has bought a house and lot a little east of the United States barracks, on Sixth avenue, and fitted up a meeting hall and living apartments for the missionaries. The opening meeting will be held this evening. Meetings will be held regularly every evening hereafter save Mondays. Mrs. Tooley and Miss Carnahan are the missionaries in charge (Daily Alaskan, 7 January 1900:4).

The house referred to in the January newspaper articles was probably the small gable-roofed structure once visible in the center of 6th Avenue (building K, Figures 3.1 and 3.4). After its purchase by the Peniels, the house was apparently moved onto the nearby lot acquired from R.N. Wilson. Evidently the western fork of Mill Creek was filled in some time during this period to provide a level spot for location of the Peniel's temporary mission. There may have been some delays in the remodeling, because the formal opening of the new mission did not occur until January 14, 1900 (Daily Alaskan, 14 January 1900:4).

The Sixth Avenue Peniel Mission, only "a block from the heart of Skagway's saloons, gambling halls, and red light district" offered "nightly meetings, Sunday services, and shelter and warmth" (Blee et al 1984:430). Services began every evening at 8 o'clock except Mondays. Prayer meetings 8 a.m. Sundays. Bible class Friday, 10 a.m. All welcome" (Daily Alaskan 8 April 1900:2).

The Peniels evidently met with some success in their missionary work for by mid-July 1900 a drive had been initiated to construct a new mission hall. "A building committee and friends numbering 25" met and $325 was subscribed towards the new building (Daily Alaskan, 18 July

1900:1:3). W.T. Iliff, operator of Captain Moore's Skagway sawmill, was president of the mission building committee, and "saw to the completion of the structure" (Blee et al. 1984:430). It is likely that the lumber for the new structure came from his mill. According to one of the missionaries

> a number of men had been saved in the Skagway mission, [and] they got together and built a nice mission hall with living quarters overhead for the workers. Miss Josie Barnett came to help us with the work. . . .(Cox 1968:47)

The hall was built on Sixth Avenue, "on the half lot where the present mission building now stands . . ." (Daily Alaskan, 18 July 1900:1).

There is no indication of what happened to the small house that had been in use as a temporary mission hall. It may have been dismantled or moved elsewhere, or it may have been moved to the back of the lot behind the new building. Contemporary photographs show the blurred image of a small structure behind the new mission (Figure 3.13). The 10- by 22-foot "shed" at the rear of the Peniel later used for storage and/or a latrine may have been the remains of the old mission building.

The new, two-story, false-fronted Peniel Mission, measuring 22 by 40 feet in size, was finished in December, 1900 (Figure 3.7).[15] Similar to many of the other frame structures in Skagway, this simple building had only an illuminated sign with the name of the mission on a post near the door to indicate its purpose. Heat came from two stoves, one on each end of the building. The first floor of the new mission hall was used for meetings and services, and the upper floor was reserved for living quarters. One of the missionaries, Mrs. Victoria Yorba, "resided with her assistants on the building's second floor until around 1910" (Spude 1983:159). Figure 3.6 shows the false fronted two story structure and the newly constructed Catholic church and McCabe College; see also Figure 3.12.

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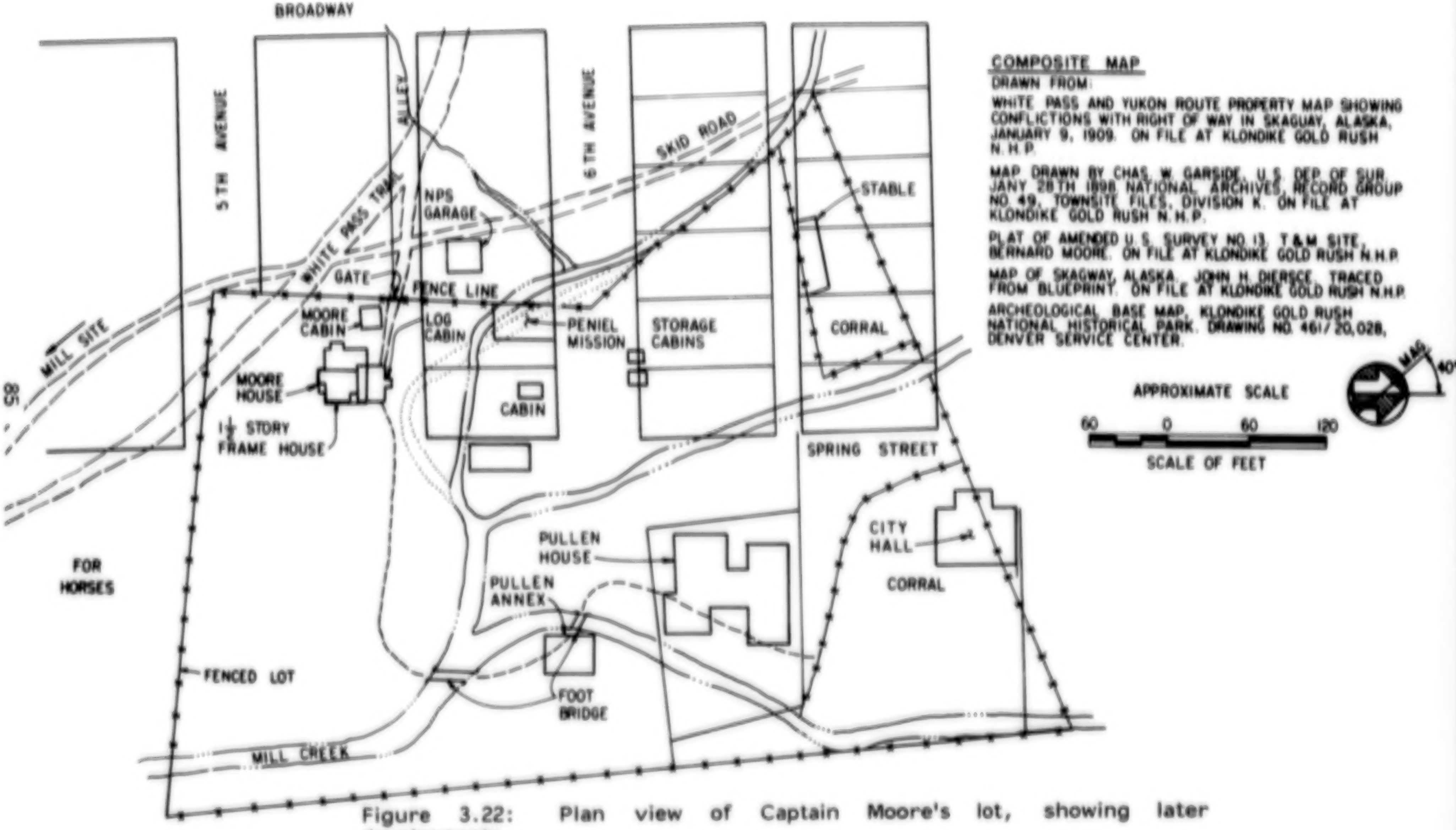
[15] A note scribbled on an interior second story board gives the name(s) of the carpenter(s) and the probable date of completion. It reads: "Walter Cole & [illegible] December 5, 1900" (Blee et al 1984:430).



COMPOSITE MAP
DRAWN FROM:

WHITE PASS AND YUKON ROUTE PROPERTY MAP SHOWING CONFLICTIONS WITH RIGHT OF WAY IN SKAGUAY, ALASKA, JANUARY 9, 1909. ON FILE AT KLONDIKE GOLD RUSH N.H.P.

MAP DRAWN BY CHAS. W. GARSIDE, U.S. DEP. OF SUR. JANY 28TH 1898. NATIONAL ARCHIVES, RECORD GROUP NO. 49, TOWNSITE FILES, DIVISION K. ON FILE AT KLONDIKE GOLD RUSH N.H.P.

PLAT OF AMENDED U.S. SURVEY NO. 13, T & M SITE, BERNARD MOORE. ON FILE AT KLONDIKE GOLD RUSH N.H.P.

MAP OF SKAGWAY, ALASKA. JOHN H. DIERSCE. TRACED FROM BLUEPRINT. ON FILE AT KLONDIKE GOLD RUSH N.H.P.

ARCHEOLOGICAL BASE MAP, KLONDIKE GOLD RUSH NATIONAL HISTORICAL PARK. DRAWING NO. 461/20,028, DENVER SERVICE CENTER.

Figure 3.22: Plan view of Captain Moore's lot, showing later developments.

The missionaries maintained a busy schedule. Besides the evening meetings and Sunday services, Bible reading was held "every day at 10 AM, Sunday at 8. Meeting in the Scandinavian Language Sunday at 3" (Blee et al. 1984:431). The mission advertised that no collections would be taken, and "all are cordially invited, especially strangers," an appealing combination for the "down and out" (Ibid. 1984:431). Further, the pattern of meetings (nightly at 8:00 p.m. and mornings at 10 a.m.) "suggests that the strangers, rather than be let out into the cold, could count on the hall as an impromptu hotel" (Ibid. 1984:431).

Though the Peniel Missionaries received only occasional mention in the local paper after the turn of the century, they obviously continued their work. They conducted funeral services, and sponsored lectures, bringing in other Peniels from Juneau, Haines, Seattle, and Portland, as well as foreign missionaries with experience in Africa (Blee et al. 1984:432). The Peniels often held services in jails in an attempt to comfort and convert the prisoners. The Scandinavian meetings were continued.

The Peniels also sponsored revivals. For example, Reverend H.M. Tourney, a converted whiskey drummer, drew a good crowd to revival meetings at the Peniel in February of 1906. The revival lasted at least three weeks, with meetings each evening and some afternoons (Daily Alaskan, 6 March 1906:1). Only women were present at some of these meetings. During the first few years of the new century, Bible class and missionary meetings were held from 9:00 to 10:30 a.m.; evening meetings were still held at 8:00 p.m. except Monday (Daily Alaskan, 6 October 1906:2,3). In November, 1906, an all-day service was held at the Peniel Mission in honor of the twentieth anniversary of the establishment of the missionary group.

Like many other Skagway enterprises, the Peniel Mission probably underwent a decline in business over the next few years. Sporadic newspaper accounts during this period mention special visitors to the Mission, and list service times. Miss Carrie Browning, the woman in charge of the Juneau Peniel Mission, was in Skagway for a short time (Daily Alaskan, 25 April 1908:3) as was a visiting African Missonary (Ibid. 26 May 1908:3). An article in the April 10, 1909 Daily Alaskan (page 2) again notes there are no collections, and welcomes all strangers and townfolk.

The last mention of the Peniel is in the June 26, 1909 paper, and in the 1909-1910 Alaska-Yukon Gazetteer and Business Directory (Polk 1903:454). It is likely that the missionary group moved elsewhere some time between 1910 and 1911, since business directories for Skagway stop listing the organization in 1911. After 1911, the "building fell into disuse" (Spude 1985).

Post-1900 Skagway. The first half decade of the twentieth entury had brought maturity to Skagway. The railroad and steamship lines were busy, and the newly acquired power to tax and collect license fees allowed the city to fund construction of numerous improvements such as "a new water system, street grading and lighting, and a new city hall and jail" (Spude 1983:42-43). Substantial churches, schools, and fraternal halls were built.

As the boom created by the gold rush cooled, business in Skagway slowed, and the population dropped. Although Skagway has served as an ore shipping terminus since the 1890s, the large consolidated Canadian mining companies did not require the same sorts of goods and services as had the stampeders. The numerous grocers and outfitters were no longer necessary, and a number of wholesalers went out of business. Some businessmen abandoned their property in Skagway rather than pay Captain Moore his 25 percent valuation under the settlement reached in 1901.

The economy of Skagway was further weakened by strict enforcement of Canadian customs at the border near White Pass, which hampered trade with the interior (Spude 1983:42). The Canadians also outlawed all non-Canadian mining claims, causing Skagway outfitters heavy losses and discouraging many would-be miners in their northward trek.

In 1907 Skagway undertook a major project--the clean up and revitalization of the community. A number of large buildings were moved to new locations; many of those that once lined Sixth Avenue were turned 90 degrees to face the railroad tracks on Broadway (Spude 1983:65). Brothels and other less desirable establishments were moved away from the center of town. High tides flooded parts of Skagway in 1901 and again in January 1908, reaching a level 27 feet above low tide; the water touched the floor of the Catholic Church on Fifth Avenue, and isolated the Pullen House on an island (Daily Alaskan, 4 January 1908:1).

That summer, the former U.S. Army barracks were moved from the north side of Sixth Avenue to become part of the Lynch and Kennedy Dry Goods building.

The Astoria Hotel was demolished in 1907 (Spude 1987). An article in the Daily Alaskan for July 16, 1907, noted that Martin Itjen had begun the "tearing down of the old iron building once an important figure in the life of Skagway." According to the paper, Mr. Itjen planned to reuse the large quantities of seasoned cedar and fir from the structure to remodel the Bay View Hotel.

Skagway's business revival was short-lived, for the 1907-1909 financial panic and closing of mines in the Yukon cut further into Skagway's sagging economy. While the tourist industry had contributed to support of local businesses during the first decade of the new century, it could not support the town during the long winter months, and by 1910 the population had shrunk to 600. A 1914 Smithsonian report described Skagway as "a wretched little town with decayed wooden houses and grass-grown streets" (Cadell 1914:364). The city's population stabilized but her "efforts to become . . . the 'San Francisco of the North' were unsuccessful" (Spude 1983:42).

Tourism continued to play a role in the city economy, particularly "during the grand ocean cruise days of the 1920s and 1930s" (Spude 1983:129). Many of the Gold Rush period structures had been retained in Skagway, giving the city its early day flavor and tourist appeal. A government document on the Territory of Alaska noted that the tourist trip from Seattle through the inside passage to Skagway "never lost its charm" (USDOI 1931:67). However, despite support provided by the railroad and tourist industries, the population of Skagway dropped even further to 492 by 1930 (USDOI 1931:10).

During the early 1940s, the onset of World War II again brought activity to Skagway's docks and streets. Skagway

> became an important military site, and the town, which had suffered considerably during the Depression, underwent a second boom reminiscent of the days of '98 (Cohen 1986:102).

Skagway was the entry port for the highway surveyors, and supplies for the construction of the Alaskan Highway were shipped to Skagway and then sent via the White Pass Route railroad to Whitehorse, Canada. The highway was needed to link Alaska with the outside world in case the Japanese invaded this area, and to service the oil pipeline known as the CANOL project (Ibid. 1986:102). The army leased the railroad and moved thousands of troops into and through the area. In 1946, the military returned the railroad to private industry and left the area. Skagway's population and business agains plummeted, with only tourism and the railroad left to provide economic support for the community. In 1980 a highway was built over White Pass, linking Skagway with Carcross and other interior Canadian cities, and trucking began to carry increasingly larger amounts of the shipping traffic. This contributed to closure of the railroad from 1982 through early in 1988 when it finally reopened. Services and retail trade, most of which was presumably linked to tourism, supported more than 50% of the employment base in 1987 (Skagway News XI (2):6).

The Peniel Mission after 1911. Deed records indicate that the property was eventually transferred from Peniel founder W.P. Ferguson to

Martin Johnson; the deed was recorded February 9, 1917.[16] The property had changed hands twice by 1920 when it was acquired by William H. Shoemaker. Shoemaker paid the taxes on the property from 1920 to 1936.

In 1937, Dr. Clayton Polly moved to Skagway from Juneau. He purchased the Peniel and completely remodeled the old mission hall by converting the first floor into living quarters with two bedrooms, a living room, dining room, and kitchen; the upstairs was reserved for his offices. Some of these changes are shown in a circa 1937 photograph of the Peniel (Figure 3.19). Polly also put in a new foundation, removed the false front, replaced the front entry with a new side entry, added a new hip roof, and put on the present grey siding. He built an exterior stairway on the west wall to give access to the second floor. He also removed the old, rotted one-story shed-roofed addition which made up the rear 10 by 22 feet of the building, replacing it with a narrow ten-foot wide addition for a washroom and a furnace.[17]

In 1947, Polly sold the old Peniel Mission to William and Beverly Feero for $6,000 and returned to Juneau. Over the next three decades, the property was sold five times before its acquisition by the National Park Service in 1978. Some time after 1959, Lon Gray put in a foundation and concrete sidewalk (Cyr 1983). After its acquisition by the government, the building was remodeled inside and new plumbing installed. During remodeling, NPS architects documented additional changes to the building (Blee et al 1984). Infill boards and framing of the second floor provide evidence of the former presence of an old stairway on the southeast wall (Cloyd 1987). The original ceilings were eleven feet in height downstairs and 8 feet, 3 inches on the second floor. There was yellow paint on the exterior drop siding, and the chimneys had been changed. The second floor doorway was altered to a long window. The "mechanical" room had been changed in configuration; the present area is shorter than the earlier version.

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[16] See Appendix D for an itemized record of the property transfers and taxes.

[17] Gary Sapp put in the furnace and plumbing systems. John Edwards did the remodeling (Polly, 1983).

CHAPTER IV: ARCHEOLOGICAL CONTEXT

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CHAPTER IV: ARCHEOLOGICAL CONTEXT

GEOLOGY AND SOILS

During the last major glacial interval, the narrow, steep-sided Skagway Valley was covered by a thick layer of ice which may have been up to 5,000 feet thick (Yehle and Lemke 1972:16). As the glaciers melted, the depressed land beneath rebounded, raising previously submerged areas above sea level. Tectonic movements caused by stresses deep within the earth may also have caused the land uplift (Yehle and Lemke 1972:18). This relatively recent re-emergence is documented by marine shells found in a small elevated beach deposit about 32 feet above mean sea level; these were radio-carbon dated at 2,800± before present.

Little glacial drift exists along the steep sides of the valley; most of it was moved downslope by gravity or streamflow shortly after the valley glaciers melted. The surface of the valley floor is formed of terrace and floodplain alluvial deposits of the Skagway River. The loose, well-bedded riverine deposits consist of gravel, some cobbles, boulders, sand and silt; stones are generally subrounded. Some beds are well sorted, but grain size may "vary abruptly" among adjacent beds (Yehle and Lemke 1972:30). The alluvial deposits overlay deltaic sands and sand and gravel. In some areas, these riverine deposits, averaging 25 feet in depth, interfinger "at depth with deltaic and marine sediments . . ." (Yehle and Lemke 1972:22). Thin blue marine [?] deposits have been found in Skagway in wells which are less than 20 feet deep. Below the blue clay deposits the ground water is fairly high in hydrogen sulfide (Yehle and Lemke 1972:31). Towards the south end of the valley, the riverine deposits are covered with man-made fill. Since 1897, natural and human forces have shifted the shoreline seaward about 500 feet, and "the harbor shoaled 4.4 feet . . ." (Yehle and Lemke 1972:4).

The cobbles, brown and grey silty sands, and sandy silt deposits in the vicinity of the Peniel Mission are remnants of an old river floodplain, which is from 5 to 10 feet higher than the modern floodplain. Pullen Creek (formerly Mill Creek) has cut into the old river terrace and follows generally the shallow former channel of the Skagway River at the southeastern side of the valley. Unlike the glacier-fed Skagway River, Pullen Creek is spring-fed. Topsoils in the Peniel Mission area are largely recently accumulated humic deposits and fill.

STRATIGRAPHY AND FEATURES

Introduction

The artifacts, features, and stratigraphic sequences uncovered by the 1983 and 1985 archeological excavations near the Peniel Mission reveal a great deal not only about the activities occurring on-site, but also about the town of Skagway and the gold rush. Two distinct historical periods, the Gold Rush era and the first three quarters of the twentieth century, are represented by these deposits. Because of their depositional history, the two different stratigraphic units found at the Peniel site will be discussed separately.

The earliest cultural deposits were created by successional episodes of refuse disposal into the former channel of a branch of Mill Creek, which had dissected the old Skagway River floodplain along the east side of the Skagway valley. These deposits were shaped to a certain degree by intermittent sorting and infill with water-borne materials.

Building I, a hip-roofed structure, was built over a portion of the dump sometime between January and April, 1898. The rest of these deposits were at least partially covered by fill, probably before or during construction of the Peniel Mission in the fall of 1900. During the first decade or so of the twentieth century, sheet trash accumulated gradually between and around the newly constructed mission and the adjacent structures. Eventually the nearby buildings were torn down, and the area next to the Peniel Mission was turned into a landscaped lawn. In the recent past, fill was imported to level the ground surface, covering over these previously deposited levels.

A general discussion of site strata will be presented in the following section, followed by a unit-by-unit description of the specific context in which the various features and material remains were found. Figures 4.1 through 4.3 show the lawn area before excavation.

DESCRIPTION

As discussed in the earlier section on methodology, the excavation units were dug stratigraphically, and in each the naturally occuring layers were given a letter designation as they were encountered. This process simplified the field work and assured that artifact provenience was correctly labelled. However, because of the nature of the creek bed stratigraphy, and because these non-contiguous units were excavated at different times by different excavators, individual strata labelled A, B, C, etc. cannot be easily traced across the site. That is, some alluvial deposits found in one part of the site may not be repeated in other areas; some units contain several layers that may have been created at the same time as a single stratum elsewhere. An amended version of a graphic tool known as a Harris Matrix was used to remedy this problem. The matrix was developed by Edward Harris (1974) for use in a complex British site with over 300 different depositional events. The matrix is

> a means of matching stratigraphic sequences that are not identical in physical appearance on discontiguous parts of a site. It allows the investigator to place an intrusive event within a relative depositional sequence and assists in the dating of unknown events by their position relative to known events (Blee 1987:39)

The matrix used at the Peniel Mission is illustrated in figure 4.4; profiles for excavation units and test trenches and the plan views are illustrated in figures 2.1 and 4.5 through 4.17. Because Unit 25-C was excavated into imported fill and contained no natural strata, it was omitted from the matrix developed for the Peniel Mission site.

Figure 4.1: Side yard of Peniel Mission, view looking northwest from the west side of the Mission.

Figure 4.2: Peniel Mission, view looking north towards Sixth Avenue.

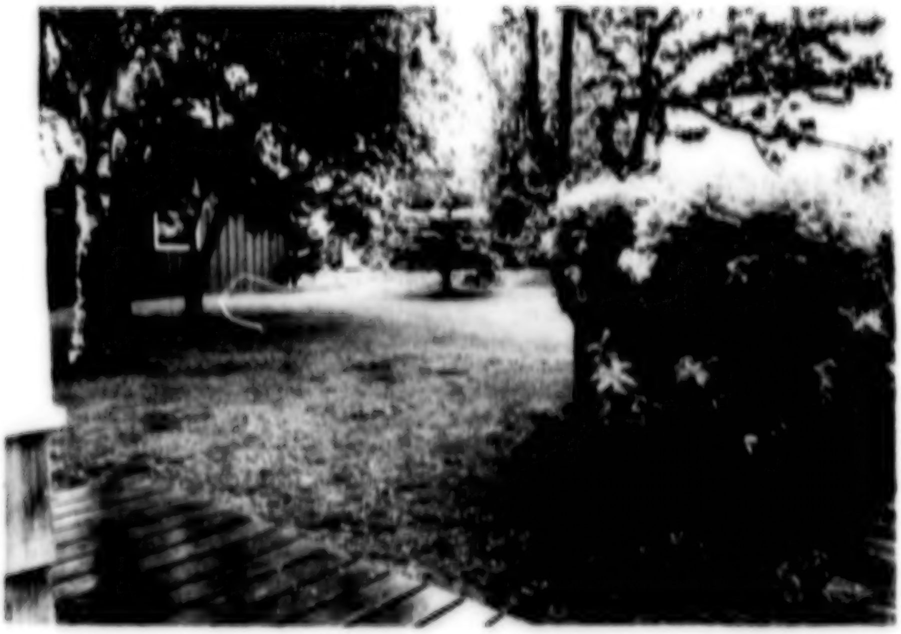

Figure 4.3: Side yard of Peniel Mission, view looking southwest from the west side of the Mission.

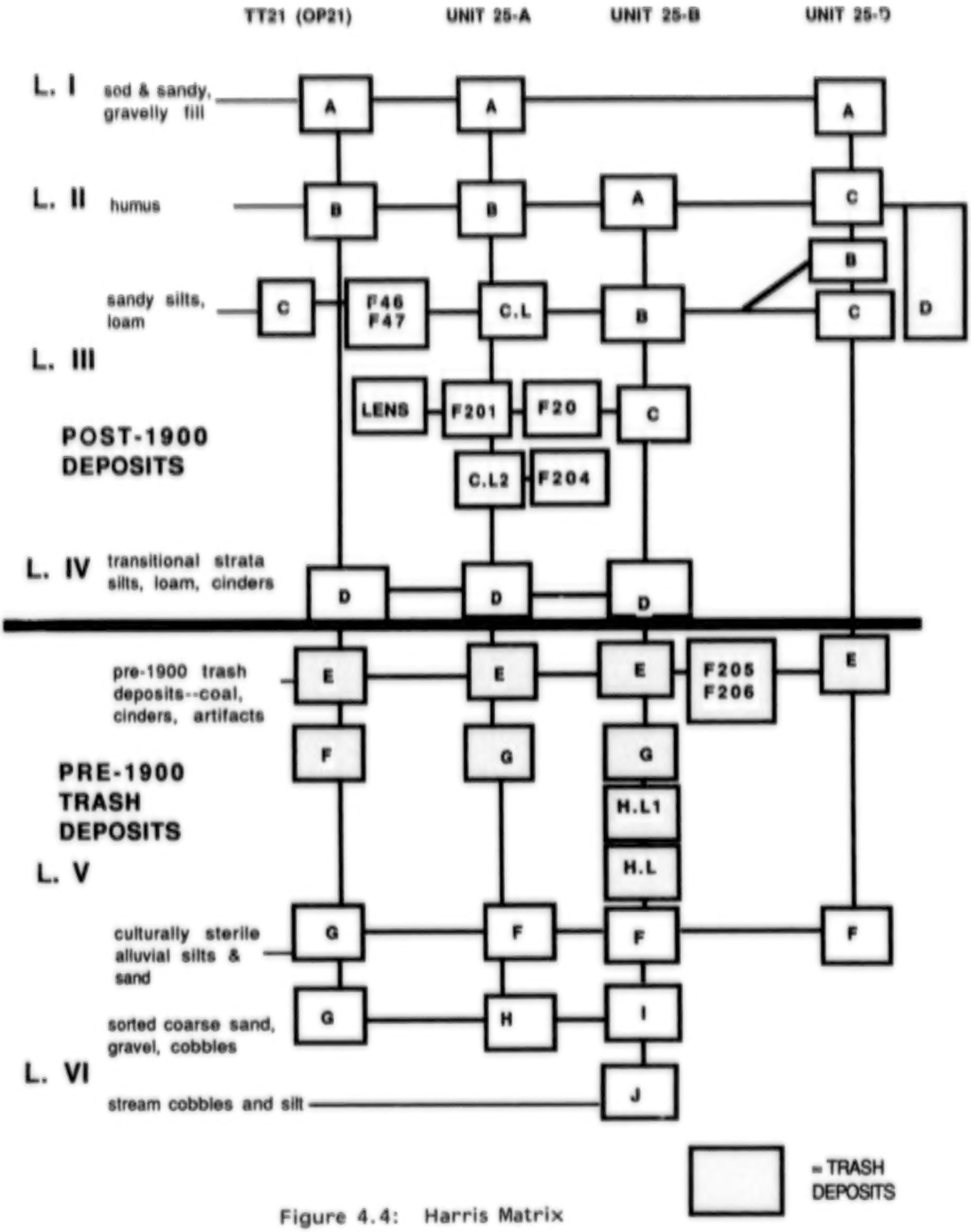

Figure 4.4: Harris Matrix

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While soil types for each level are itemized on figures 4.5 through 4.10 as recorded in the field (and as lab checked), shorter, more general terms are used on the Harris matrix (Figure 4.4). The matrix and the following discussion will utilize uppercase Roman numerals (Level I, Level II, etc.) to identify the inclusive stratigraphic units which extend across the site, and to focus upon the specific context in which the various features and materials remains were found.

Pre-1900 Deposits (Levels V and VI)

The pre-1900 deposits were divided into two levels, Level V and Level VI. Level VI consisted of culturally sterile alluvial materials: silts and sand; sorted coarse sand, gravel, and cobbles; and stream cobbles firmly embedded in fine silts. Most of these alluvial materials were deposited by stream action of both the modern and the ancestral Skagway Rivers. Later, Pullen (Mill) Creek bisected the floodplain, washing away, building up, and generally rearranging the alluvial deposits along the southeast side of the valley. Occasionally high tides inundated the area, contributing additional detritus.

With the onset of the Gold Rush in the Skagway valley, the meandering, braided channel of Mill Creek became a nuisance to city developers. Parts of the creek channel were filled, the stream was diverted, and small footbridges were built to allow easy access to lots east of the creek. In the vicinity of the Peniel Mission, trash was dumped into the westernmost channel which ran just behind the Moore house and cabin. This trash makes up the Level V deposits.

The following discussion will trace Levels V and VI across the site, beginning with a description of the Operation 21 test trench (TT21) where Level VI was first encountered. The stratigraphic sequence within this level is shown in figure 4.4. The Operation 21 test trench, excavated along the 1983 waterline corridor, was divided into units 21-A, 21-B, 21-C, and 21-D, each measuring 5 feet long by 1½ feet wide. The trench also encompassed four previously excavated shovel tests (test 20-J in TT21-A; test 20-K in TT21-B; test 20-L in TT21-C; and test 20-M in TT21-D) (Figures 2.1, 4.5, and 4.6).

In the test trench, Level VI is made up of Stratum G. This stratum contained several undesignated layers. Uppermost was a small amount of black and brown charcoal and wood fragments. Below that, a very dark greyish brown silty sand was layered very trim. Numerous gravels and cobbles ranging in size from marble size to softball size were found closer to the base of this generally sterile stratum. Water was present at 2.90 feet below existing ground surface in test unit TT21-B; there was no silt layer present in TT21-C. Trench excavation was ended at Stratum G.

Excavation Unit 25-A (N5W10) was dug southeast of the trench, towards the mission (Figure 2.1). The waterline trench (TT21) and the bottom of shovel test 20-J (dug in 1983) were visible in the northwest corner of the unit 25-A (Figures 4.10 through 4.12). In Unit 25-A, the culturally sterile alluvial soils of Level VI are contained in strata F and H (Figure 4.4). The lower strata, stratum H, is composed of pebbles and gravels up to about 4.0 inches in diameter. These materials are contained in a coarse tan sand and silt matrix (Figure 4.6). Water sorting of the coarser materials was obvious along the leading edge of the bank (G/H interface). The interface between strata H and G was also stained from rust nodules which, being heavier than much of the rest of the debris, tended to collect just below the crest of the bank. Unit excavation was halted at the top of the stream bank (stratum H), which lies almost 1.3 feet higher than the adjacent silt lens/trash layer, Level V (stratum G).

In this unit the upper portion of Level VI is made up of stratum F, a very compact dark grey-brown sandy silt mottled with sand and humic materials. Stratum F overlay stratum H, and covered only the southwestern portion of unit 25-A. A compacted row of pebbles, coarse sand, and iron nodules extended along the north edge of the stratum at its interface with stratum E. The essentially sterile stratum F soils were a continuation of the creek bank, showing the sorted layering characteristic of alluvial deposits.

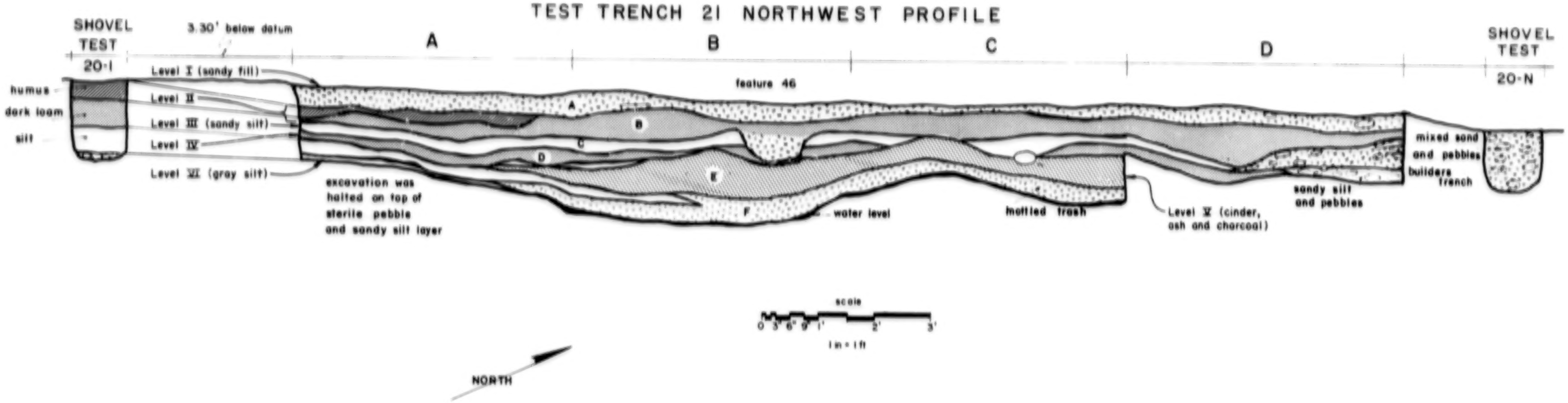
Soils in unit 25-B (N25W20) were similar to those in unit 25-A (Figures 4.4, 4.7, 4.9 and 4.10), but three strata are contained within Level VI--stratum F, stratum I, and stratum J. The sharp vertical division between the sandy silts of the creek bank and the trash-filled stream bed was visible in the lower strata of unit 25-B; in plan view the lowest exposed strata, J and I, lay side by side diagonally across the unit (Figure 4.13).

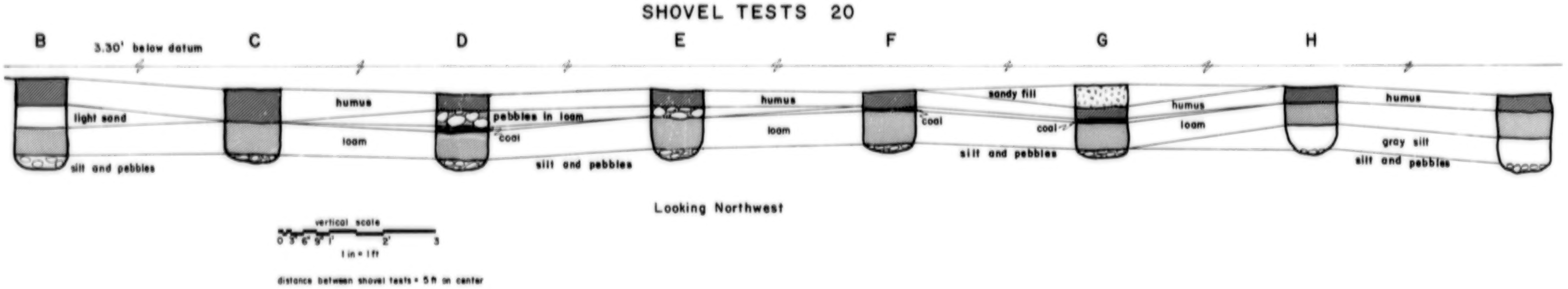
Excavation of unit 25-B was halted at the top of stratum J which was a dense concentration of cobbles set in a matrix of very dark gray silt. This stratum occupied the northeastern third of the unit. The packed river cobbles ranged in size from the hen's eggs to tennis balls. This sterile stratum, which marked the stream bottom, lay directly beneath level 2 of stratum H.

The top of stratum I, adjacent to stratum J, was skim shoveled about 2 or 3 inches to ascertain sterility; the only finding was one small red brick fragment. This stratum was composed of dark greyish brown, slightly mottled silty sand (Figure 4.7). In the southwest corner of the unit was a concentration of very loosely packed pea gravel and river cobbles ranging from marble to grapefruit size.

Stratum F overlay stratum I, and interfolded into stratum G (Figures 4.7 and 4.10). Stratum F soils were very mottled, consisting largely of sand and silt with small amounts of loam. This stream-sorted stratum was more sandy in the south portion, grading to silt and loam along the northern portion. By the end of the stratum, the demarcation line between stream bank and stream bed deposits could be clearly defined.

In Unit 25-D Level VI was represented by only one stratum, stratum F, a very fine brown sandy sterile silt with occasional darker mottles from roots (see west profile of unit 25-D, Figure 4.8). In this complex unit, Level VI (stratum F) composed the southern creek bank adjacent to and underlying the voluminous trash deposits in the creek bed.





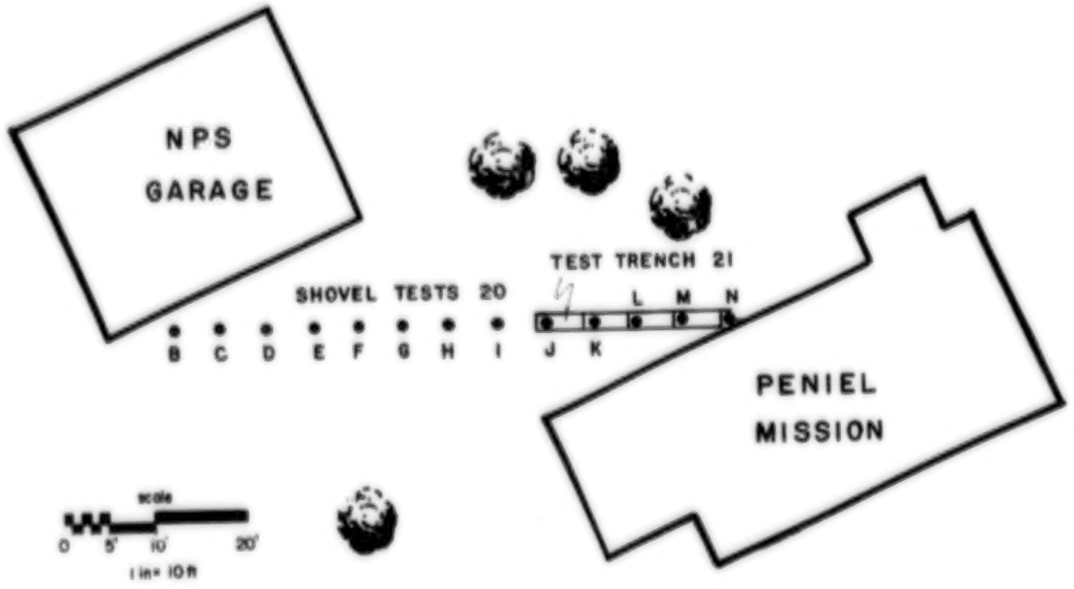


FIGURE 4.5

DESIGNED	SUB SHEET NO	TITLE OF SHEET	DRAWING NO
BLEE		SOIL PROFILES 1983-1985 ARCHEOLOGICAL INVESTIGATIONS PENIEL MISSION KLONDIKE GOLD RUSH N.H.P.	461 25,025A
DRAWN: DRAFTING BR.			PKG. NO. 114D
TECH. REVIEW: BLEE			SHEET 2
DATE: 7/88			OF 7

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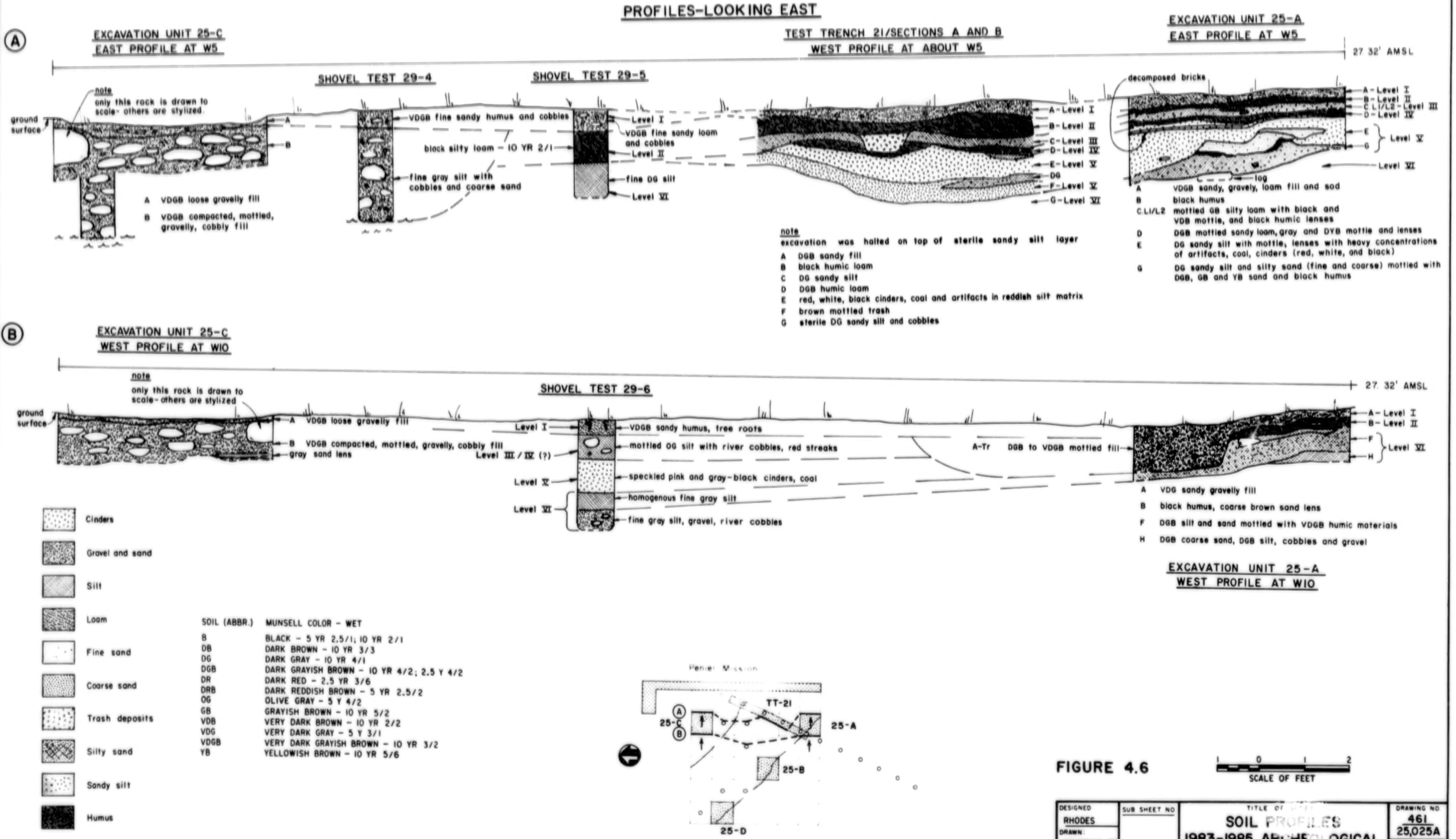
PROFILES-LOOKING EAST



Excavation Unit 25-C, East Profile at W5:

A VDGB loose gravelly fill
B VDGB compacted, mottled, gravelly, cobbly fill

Test Trench 21:

note
excavation was halted on top of sterile sandy silt layer

A DGB sandy fill
B black humic loam
C DG sandy silt
D DGB humic loam
E red, white, black cinders, coal and artifacts in reddish silt matrix
F brown mottled trash
G sterile DG sandy silt and cobbles

Excavation Unit 25-A, East Profile at W5:

A VDGB sandy, gravely, loam fill and sod
B black humus
C.L1/L2 mottled GB silty loam with black and VDB mottle, and black humic lenses
D DGB mottled sandy loam, gray and DYB mottle and lenses
E DG sandy silt with mottle, lenses with heavy concentrations of artifacts, coal, cinders (red, white, and black)
G DG sandy silt and silty sand (fine and coarse) mottled with DGB, GB and YB sand and black humus

Excavation Unit 25-A, West Profile at W10:

A VDG sandy gravelly fill
B black humus, coarse brown sand lens
F DGB silt and sand mottled with VDGB humic materials
H DGB coarse sand, DGB silt, cobbles and gravel

SOIL (ABBR.)	MUNSELL COLOR - WET
B	BLACK - 5 YR 2.5/1; 10 YR 2/1
DB	DARK BROWN - 10 YR 3/3
DG	DARK GRAY - 10 YR 4/1
DGB	DARK GRAYISH BROWN - 10 YR 4/2; 2.5 Y 4/2
DR	DARK RED - 2.5 YR 3/6
DRB	DARK REDDISH BROWN - 5 YR 2.5/2
OG	OLIVE GRAY - 5 Y 4/2
GB	GRAYISH BROWN - 10 YR 5/2
VDB	VERY DARK BROWN - 10 YR 2/2
VDG	VERY DARK GRAY - 5 Y 3/1
VDGB	VERY DARK GRAYISH BROWN - 10 YR 3/2
YB	YELLOWISH BROWN - 10 YR 5/6

FIGURE 4.6

1 0 1 2
SCALE OF FEET

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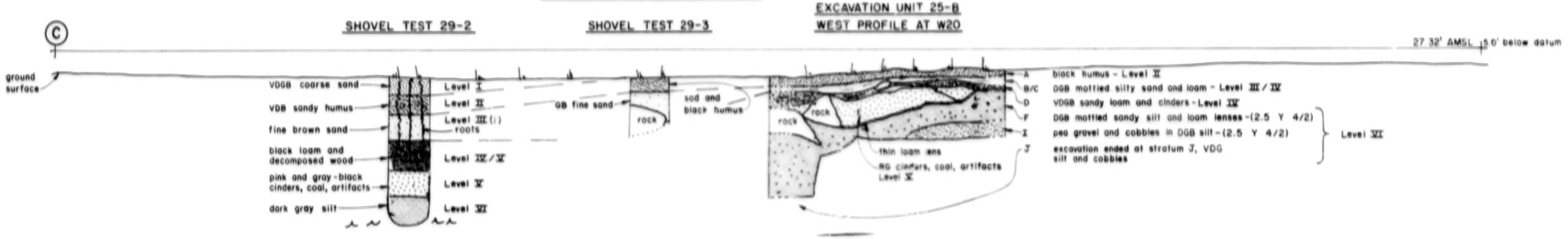
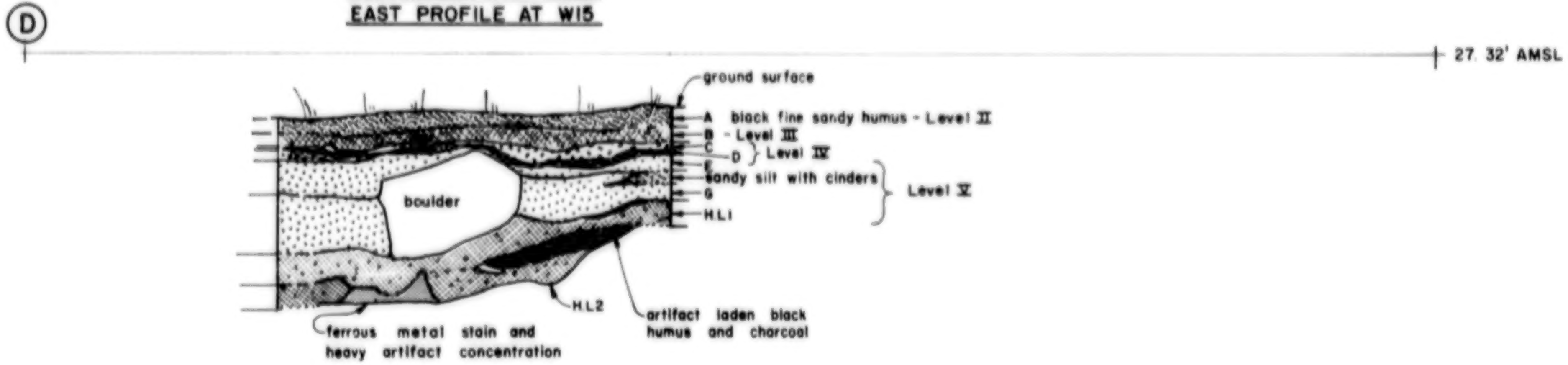
PROFILES-LOOKING EAST


SHOVEL TEST 29-2
SHOVEL TEST 29-3
EXCAVATION UNIT 25-B
WEST PROFILE AT W20
C
27.32' AMSL
5.0' below datum
ground surface
VDGB coarse sand
VDB sandy humus
fine brown sand
black loam and decomposed wood
pink and gray-black cinders, coal, artifacts
dark gray silt
Level I
Level II
Level III (i)
roots
Level IV/V
Level V
Level VI
GB fine sand
rock
sod and black humus
rock
rock
thin loam lens
RG cinders, coal, artifacts Level V
A
B/C
D
F
I
J
black humus - Level II
DGB mottled silty sand and loam - Level III/IV
VDGB sandy loam and cinders - Level IV
DGB mottled sandy silt and loam lenses - (2.5 Y 4/2)
pea gravel and cobbles in DGB silt - (2.5 Y 4/2)
excavation ended at stratum J, VDG silt and cobbles
Level VI

EXCAVATION UNIT 25-B
EAST PROFILE AT W15


D
27.32' AMSL
ground surface
A black fine sandy humus - Level II
B - Level III
C
D
Level IV
E
sandy silt with cinders
G
H.L.1
Level V
boulder
H.L.2
artifact laden black humus and charcoal
ferrous metal stain and heavy artifact concentration

B	mottled DGB silty sand and loam fill (10 YR 4/2)
C	VDGB mottled, disturbed sandy loam and RB cinders
D	DRB mottled red and gray cinders, ash, loam and silt with cobbles
E	compacted red, black and white cinders, ash and charcoal in silt matrix with heavy artifact concentration
G	orange and yellow-gray cinders, sandy silt lenses
H.L.1	DGB mottled, heavy, sandy silt with numerous dark red streaks (2.5 Y 4/2)
H.L.2	VDG mottled, heavy, sandy silt with numerous dark red streaks

▨	Cinders
▨	Gravel and sand
▨	Silt
▨	Loam
□	Fine sand
▨	Coarse sand
▨	Trash deposits
▨	Silty sand
▨	Sandy silt
■	Humus

SOIL (ABBR.)	MUNSELL COLOR - WET
B	BLACK - 5 YR 2.5/1; 10 YR 2/1
DB	DARK BROWN - 10 YR 3/3
DG	DARK GRAY - 10 YR 4/1
DGB	DARK GRAYISH BROWN - 10 YR 4/2; 2.5 Y 4/2
DR	DARK RED - 2.5 YR 3/6
DRB	DARK REDDISH BROWN - 5 YR 2.5/2
OG	OLIVE GRAY 5 Y 4/2
GB	GRAYISH BROWN - 10 YR 5/2
VDB	VERY DARK BROWN - 10 YR 2/2
VDG	VERY DARK GRAY - 5 Y 3/1
VDGB	VERY DARK GRAYISH BROWN - 10 YR 3/2
YB	YELLOWISH BROWN - 10 YR 5/6

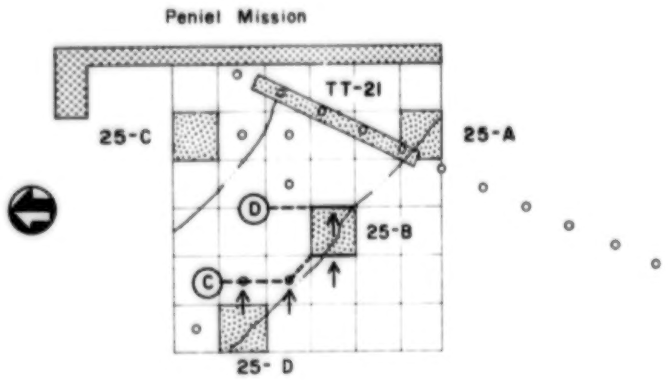


FIGURE 4.7

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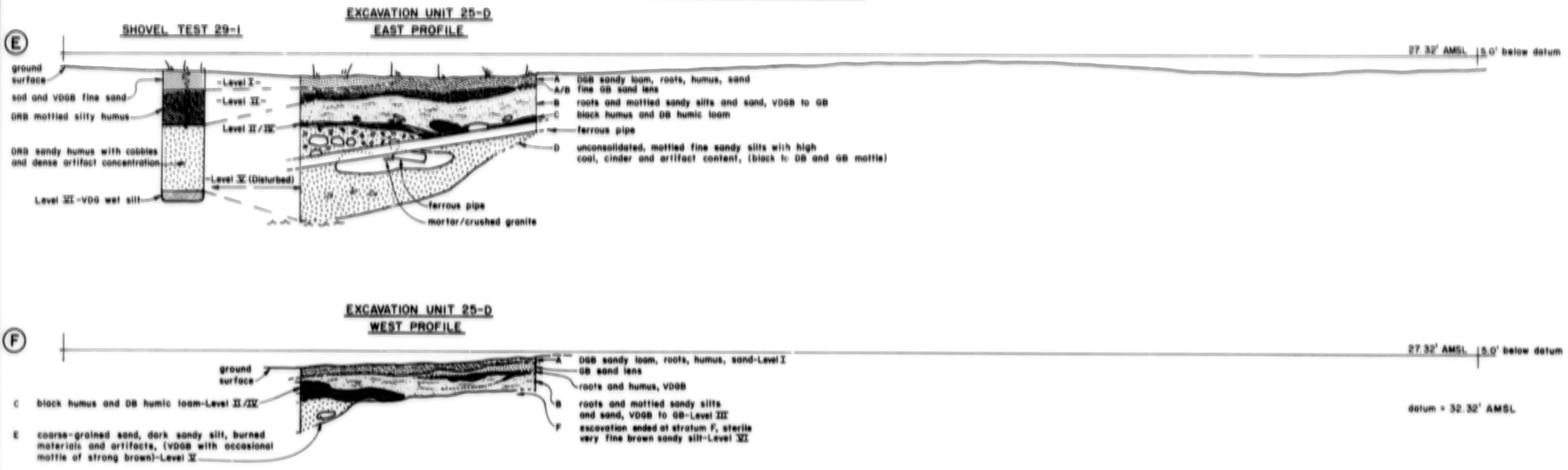
PROFILES–LOOKING EAST


SHOVEL TEST 29-1
EXCAVATION UNIT 25-D
EAST PROFILE
E
27.32' AMSL
5.0' below datum
ground surface
sod and VDGB fine sand
DRB mottled silty humus
DRB sandy humus with cobbles and dense artifact concentration
Level VI-VDG wet silt
-Level I-
-Level II-
Level II/IV
-Level V (Disturbed)
A DGB sandy loam, roots, humus, sand
A/B fine GB sand lens
B roots and mottled sandy silts and sand, VDGB to GB
C black humus and DB humic loam
ferrous pipe
D unconsolidated, mottled fine sandy silts with high coal, cinder and artifact content, (black to DB and GB mottle)
ferrous pipe
mortar/crushed granite
EXCAVATION UNIT 25-D
WEST PROFILE
F
27.32' AMSL
5.0' below datum
ground surface
C black humus and DB humic loam-Level II/IV
E coarse-grained sand, dark sandy silt, burned materials and artifacts, (VDGB with occasional mottle of strong brown)-Level V
A DGB sandy loam, roots, humus, sand-Level I
GB sand lens
roots and humus, VDGB
B roots and mottled sandy silts and sand, VDGB to GB-Level III
F excavation ended at stratum F, sterile very fine brown sandy silt-Level VI
datum = 32.32' AMSL

▨ Cinders

▨ Gravel and sand

▨ Silt

▨ Loam

▨ Fine sand

▨ Coarse sand

▨ Trash deposits

▨ Silty sand

▨ Sandy silt

■ Humus

SOIL (ABBR.)	MUNSELL COLOR - WET
B	BLACK - 5 YR 2.5/1; 10 YR 2/1
DB	DARK BROWN - 10 YR 3/3
DG	DARK GRAY - 10 YR 4/1
DGB	DARK GRAYISH BROWN - 10 YR 4/2; 2.5 Y 4/2
DR	DARK RED - 2.5 YR 3/6
DRB	DARK REDDISH BROWN - 5 YR 2.5/2
OG	OLIVE GRAY 5 Y 4/2
GB	GRAYISH BROWN - 10 YR 5/2
VDB	VERY DARK BROWN - 10 YR 2/2
VDG	VERY DARK GRAY - 5 Y 3/1
VDGB	VERY DARK GRAYISH BROWN - 10 YR 3/2
YB	YELLOWISH BROWN - 10 YR 5/6

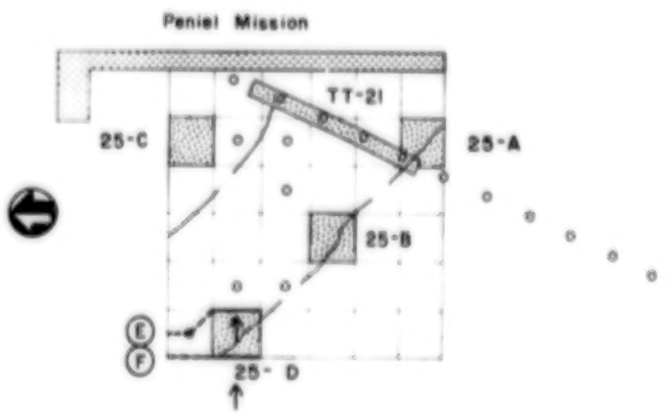


FIGURE 4.8

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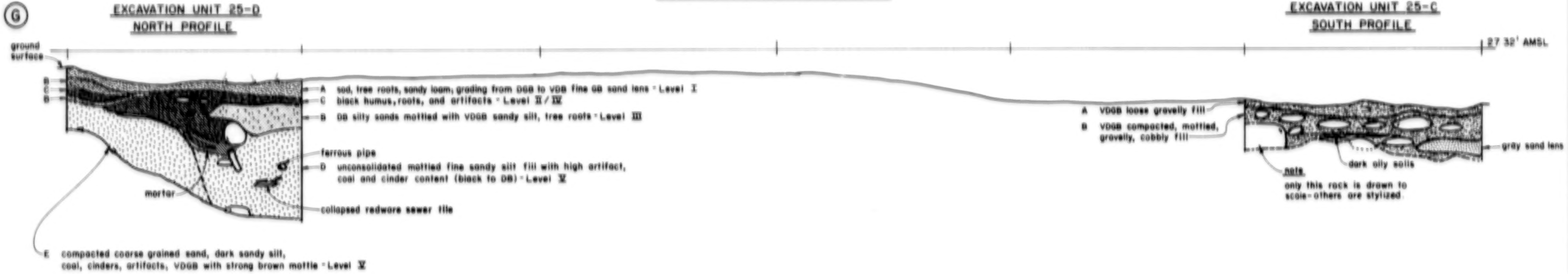
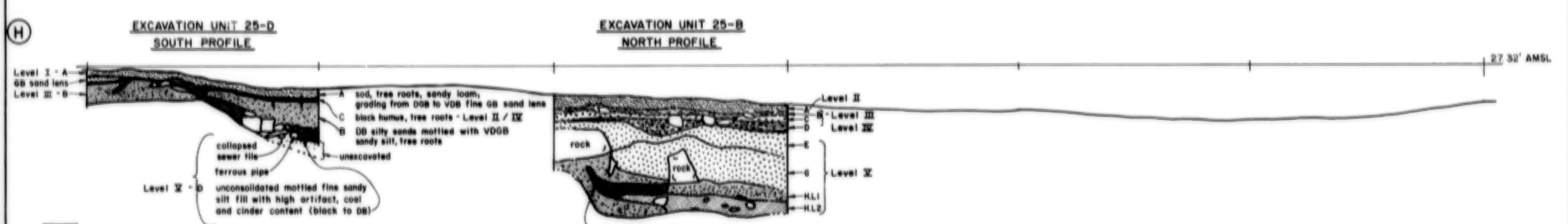
PROFILES–LOOKING NORTH


G
EXCAVATION UNIT 25-D
NORTH PROFILE
EXCAVATION UNIT 25-C
SOUTH PROFILE
27 32' AMSL
ground surface
B
C
D
A sod, tree roots, sandy loam, grading from DGB to VDB fine GB sand lens - Level I
C black humus, roots, and artifacts - Level II / IV
B DB silty sands mottled with VDGB sandy silt, tree roots - Level III
ferrous pipe
D unconsolidated mottled fine sandy silt fill with high artifact, coal and cinder content (black to DB) - Level V
mortar
collapsed redware sewer tile
E compacted coarse grained sand, dark sandy silt, coal, cinders, artifacts, VDGB with strong brown mottle - Level V
A VDGB loose gravelly fill
B VDGB compacted, mottled, gravelly, cobbly fill
gray sand lens
dark oily soils
note
only this rock is drawn to scale - others are stylized.


H
EXCAVATION UNIT 25-D
SOUTH PROFILE
EXCAVATION UNIT 25-B
NORTH PROFILE
27 32' AMSL
Level I - A
GB sand lens
Level III - B
A sod, tree roots, sandy loam, grading from DGB to VDB fine GB sand lens
C black humus, tree roots - Level II / IV
B DB silty sands mottled with VDGB sandy silt, tree roots
unexcavated
collapsed sewer tile
ferrous pipe
Level V - D unconsolidated mottled fine sandy silt fill with high artifact, coal and cinder content (black to DB)
rock
rock
Level II
A
B - Level III
C
D Level IV
E
G
H.L1
H.L2
Level V
black artifact-laden humus lens

A	black humus
B	mottled DGB silt, sand, humus, cinders and roots (10 YR 4/2)
C	VDGB mottled, disturbed sand, silt, loam, cinder mixture
D	DRB mottled red and gray cinders and ash, with some loam, silt and cobbles
E	compacted red, black, and white cinders, ash, and charcoal in fine silt matrix with heavy artifact concentration
G	orange and yellow-gray cinders with some silt and loam
H.L1	DGB mottled heavy sandy silt (2.5 Y 4/2)
H.L2	VDG mottled heavy sandy silt

▨	Cinders
▨	Gravel and sand
▨	Silt
▨	Loam
▨	Fine sand
▨	Coarse sand
▨	Trash deposits
▨	Silty sand
▨	Sandy silt
■	Humus

SOIL (ABBR.)	MUNSELL COLOR – WET
B	BLACK – 5 YR 2.5/1; 10 YR 2/1
DB	DARK BROWN – 10 YR 3/3
DG	DARK GRAY – 10 YR 4/1
DGB	DARK GRAY BROWN – 10 YR 4/2; 2.5 YR 4/2
DR	DARK RED – 2.5 YR 3/6
DRB	DARK REDDISH BROWN – 5 YR 2.5/2
OG	OLIVE GRAY 5 Y 4/2
GB	GRAYISH BROWN – 10 YR 5/2
VDB	VERY DARK BROWN – 10 YR 2/2
VDG	VERY DARK GRAY – 5 YR 3/1
VDGB	VERY DARK GRAYISH BROWN – 10 YR 3/2
YB	YELLOWISH BROWN – 10 YR 5/6

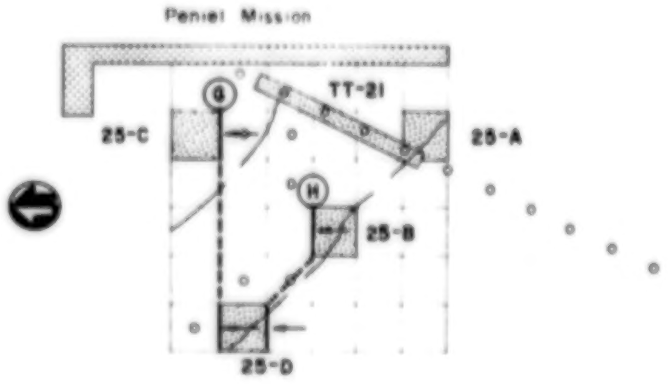


FIGURE 4.9

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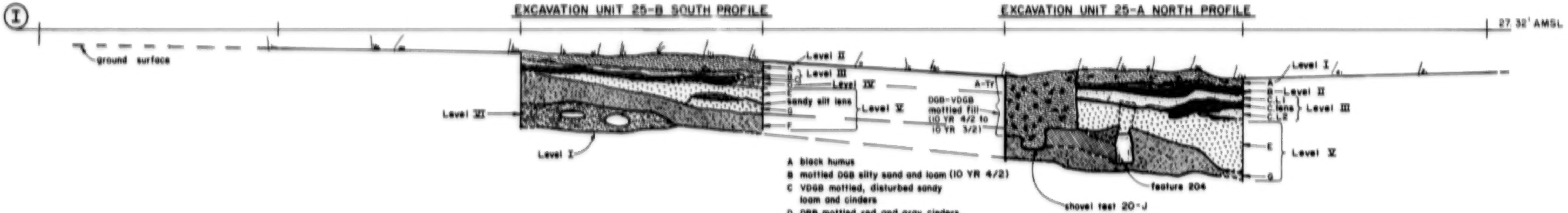
TECH. REVIEW:
DATE: 7/88

SUB SHEET NO

TITLE OF SHEET
SOIL PROFILES
1983-1985 ARCHEOLOGICAL
INVESTIGATIONS
PENIEL MISSION
KLONDIKE GOLD RUSH N.H.P.

DRAWING NO
461
25,025A
PKG. NO.
114D
SHEET
6
OF 7

PROFILES-LOOKING NORTH



A	black humus
B	mottled DGB silty sand and loam (10 YR 4/2)
C	VDGB mottled, disturbed sandy loam and cinders
D	DRB mottled red and gray cinders, ash, loam, and silt with cobbles
E	compacted red, black and white cinders, ash, and charcoal in fine silt matrix with heavy artifact concentration
F	mottled DGB sandy silt, sand and loam (2.5 Y 4/2)
G	orange and yellow-gray cinders, with silt and loam lenses
I	pea gravel and cobbles in VDG silt (2.5 Y 4/2)

A	VDGB Sandy, gravelly, loam fill and sod
B	black humus (10 YR 2/1)
C.L1	mottled GB silty loam with black and VDB mottle
C.lens	black humus
C.L2	mottled GB silty sand, VDB loam and black humic lenses
E	DG sandy silt with mottle, lenses with heavy concentrations of artifacts, coal, and (red, white and black) cinders
G	DG sandy silt and silty sand (fine and coarse) mottled with DYB

- ▨ Cinders
- ▨ Gravel and sand
- ▨ Silt
- ▨ Loam
- ▨ Fine sand
- ▨ Coarse sand
- ▨ Trash deposits
- ▨ Silty sand
- ▨ Sandy silt
- ■ Humus

SOIL (ABBR.)	MUNSELL COLOR - WET
B	BLACK - 5 YR 2.5/1; 10 YR 2/1
DB	DARK BROWN - 10 YR 3/3
DG	DARK GRAY - 10 YR 4/1
DGB	DARK GRAYISH BROWN-10 YR 4/2; 2.5 Y 4/2
DR	DARK RED - 2.5 YR 3/6
DRB	DARK REDDISH BROWN - 5 YR 2.5/2
OG	OLIVE GRAY - 5 Y 4/2
GB	GRAYISH BROWN - 10 YR 5/2
VDB	VERY DARK BROWN - 10 YR 2/2
VDG	VERY DARK GRAY - 5 Y 3/1
VDGB	VERY DARK GRAYISH BROWN - 10 YR 3/2
YB	YELLOWISH BROWN - 10 YR 5/6

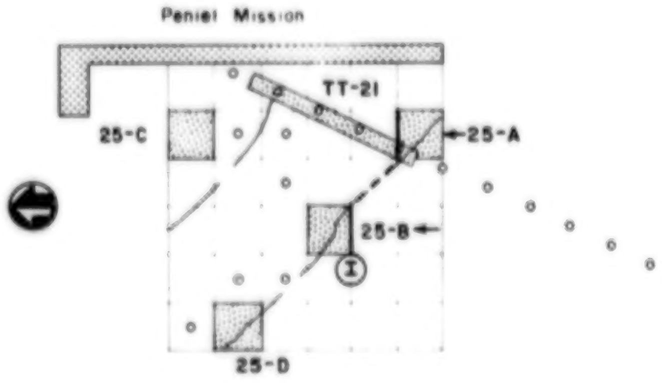


FIGURE 4.10

SCALE OF FEET

DESIGNED RHODES DRAWN: DRAFTING BR. TECH. REVIEW: BLEE DATE: 7/88	SUB SHEET NO	TITLE OF SHEET SOIL PROFILES 1983-1985 ARCHEOLOGICAL INVESTIGATIONS PENIEL MISSION KLONDIKE GOLD RUSH N.H.P.	DRAWING NO 461 25,025 A PKG. NO. 114D	SHEET 7 OF 7

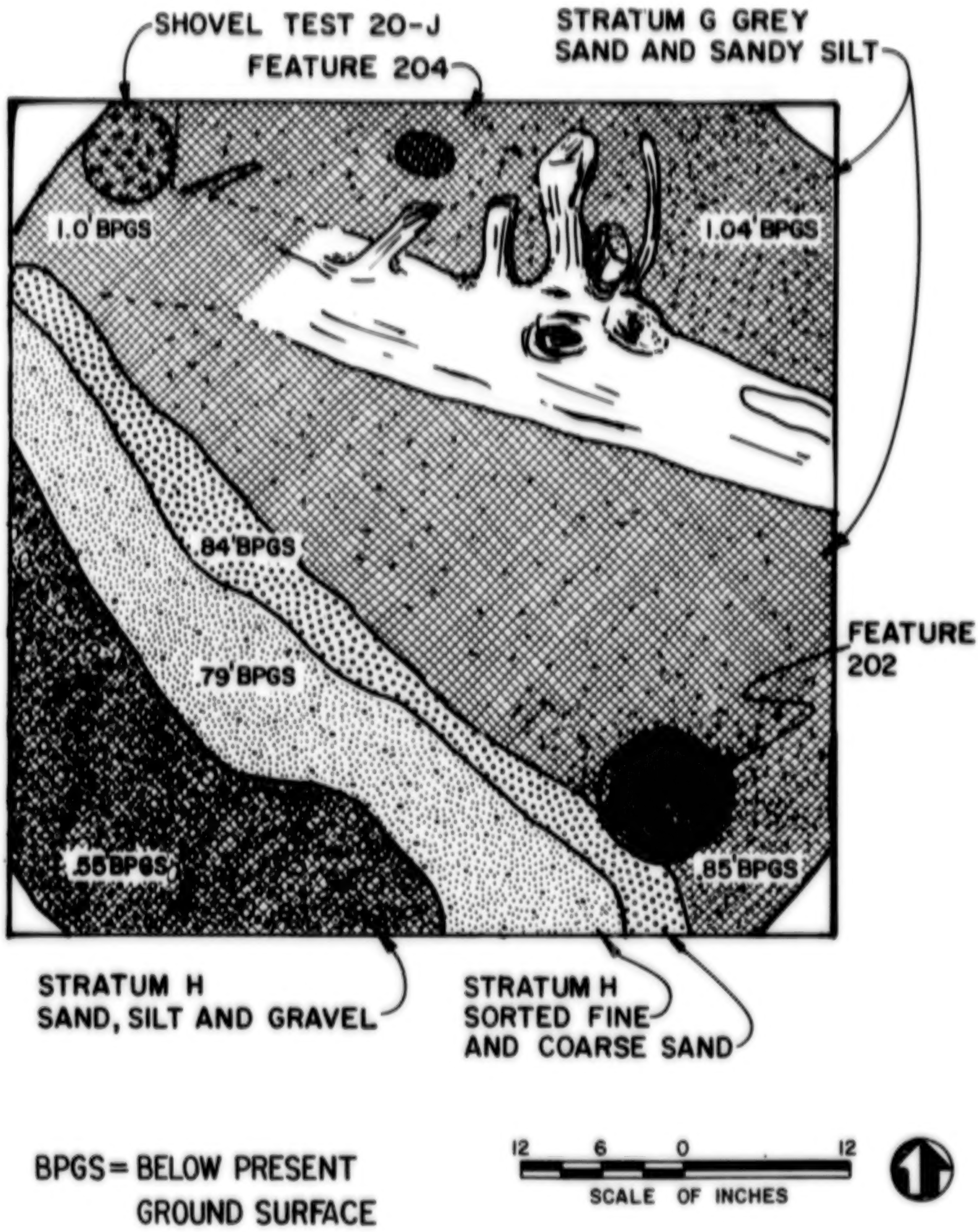

SHOVEL TEST 20-J
FEATURE 204
STRATUM G GREY SAND AND SANDY SILT
1.0' BPGS
1.04' BPGS
.84' BPGS
.79' BPGS
FEATURE 202
.55 BPGS
.85' BPGS
STRATUM H SAND, SILT AND GRAVEL
STRATUM H SORTED FINE AND COARSE SAND
BPGS = BELOW PRESENT GROUND SURFACE
12
6
0
12
SCALE OF INCHES

Figure 4.11: Plan view of excavation unit 25-A at end of excavation showing location of features 202 and 204.

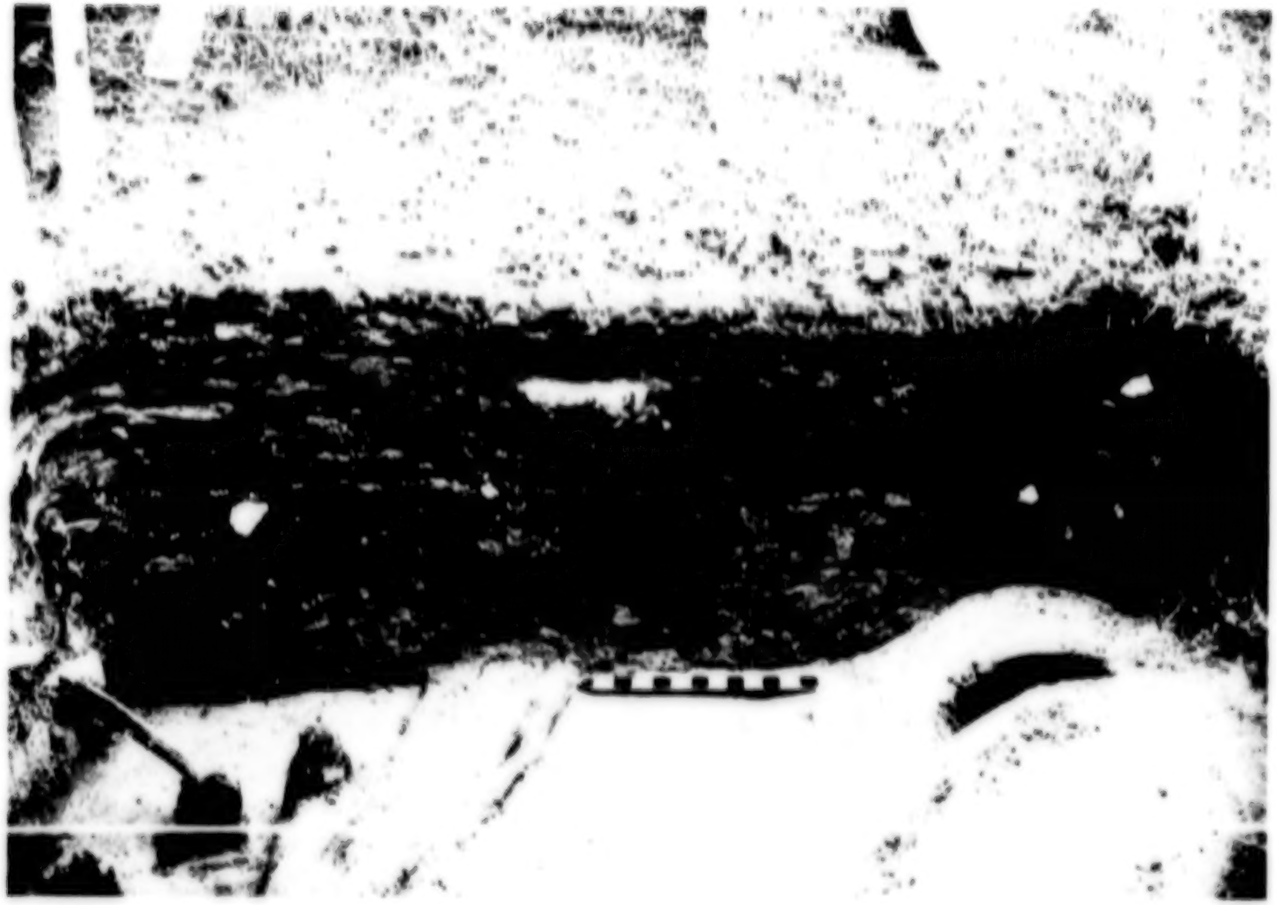


Figure 4.12: Looking down and east at east profile of excavation unit 25-A.

Level V: This level is made up of dense trash deposits with intermittant and interwoven lenses of alluvially deposited sand, silt, and humic materials (Figure 4.4). It appears to have been present mainly within the creekbanks. The left bank of Mill creek runs from about the southwest corner of the Peniel Mission towards the northwest corner of the lot (Figure 2.1). The test units were placed specifically to trace this bank. Cultural materials found on top of the essentially sterile creek banks adjacent to the trash deposits were included with the next level (Level IV) because of their mixed associations.

In the Operation 21 test trench, two strata (Stratum E and Stratum F) make up Level V (Figures 4.4 and 4.6). At first, the interlayered silts and mottled garbage in this level of the test trench were excavated as separate strata. After completion of unit 21-C when it became apparent that both the garbage and the alluvial silt lenses were composite parts of Level V, they were lumped together into one stratum and dug as a whole.

Stratum F was composed of brown mottled silts surrounding trash, identical to stratum E deposits except for the color. Both surfaces of this stratum undulated a great deal. The stratum was loaded with artifacts, including large numbers of tin can fragments; only the pieces larger than a quarter were collected. Wood fragments were layered in random fashion near the top of the silt. Part of stratum F lay below stratum G, and part connected with and graded into stratum E. Stratum F was nonexistent for parts of unit 21-B.

In unit 21-B of the test trench, Stratum G (Level VI) connected with and graded into stratum E (Level V). The surface of stratum E was very uneven, and most of the top of the stratum was higher in unit 21-C than in unit 21-D. The red, black, white, and grey mottled trash deposits of stratum E were made up of a fine sand/silt matrix which contained great qualities of charcoal and coal, and artifacts, both burned and unburned.

At the north end of unit D, a grey, sandy, loose, pebbly layer lay adjacent to stratum E. This loose, sandy area may have been intrusive fill, not something laid down naturally before stratum E. The interface between the loose sand and stratum E was almost vertical, but it appears the fill postdates deposition of stratum E. At the south end of unit 21-D the cinders and humus of stratum E appear to be layered.

In excavation unit 25-A the trash and alluvial lenses of Stratum G and Stratum E make up Level V. In Stratum G a large log lay parallel to the stream bank across the northeast corner of the unit; other limbs of unknown length extended up from the streambed (Figures 4.6 and 4.11-4.12). Patterning in the sand/silt around the log indicates it was in place during the time the stream bed was active. The excavation was ended at the base of the log.

Level V (Stratum G) soils around and under the log were a grey sandy silt containing lenses of tan and grey silty sand, occasional organic mottle, and pockets of burned material and artifacts (Figures 4.4 and 4.6). Almost all the artifacts in Stratum G were found in small pockets of cinders toward the upper part of the level; the lower two or three inches were sterile.

Features 202 and 204, badly decomposed shaped wooden posts and possible post molds, extended down into Stratum G (Figures 4.10 through 4.12; 4.14 and 4.15). Slightly darker, looser soils around feature 202 suggest a modest post mold. This "post mold" contained extremely sandy soils with numerous stains and pockets of dark organic materials. However, the post mold differed relatively little from surrounding soils, and definition was difficult.

The post recovered from feature 202 is very short, measuring ten inches in length by about 3 inches across at the widest point (figures 4.14 and 4.15). The total discernible depth of post and post mold is 1.14 feet. The post appears to have been milled wood which was secondarily shaped with an axe. It is flat on one vertical face; the two adjacent

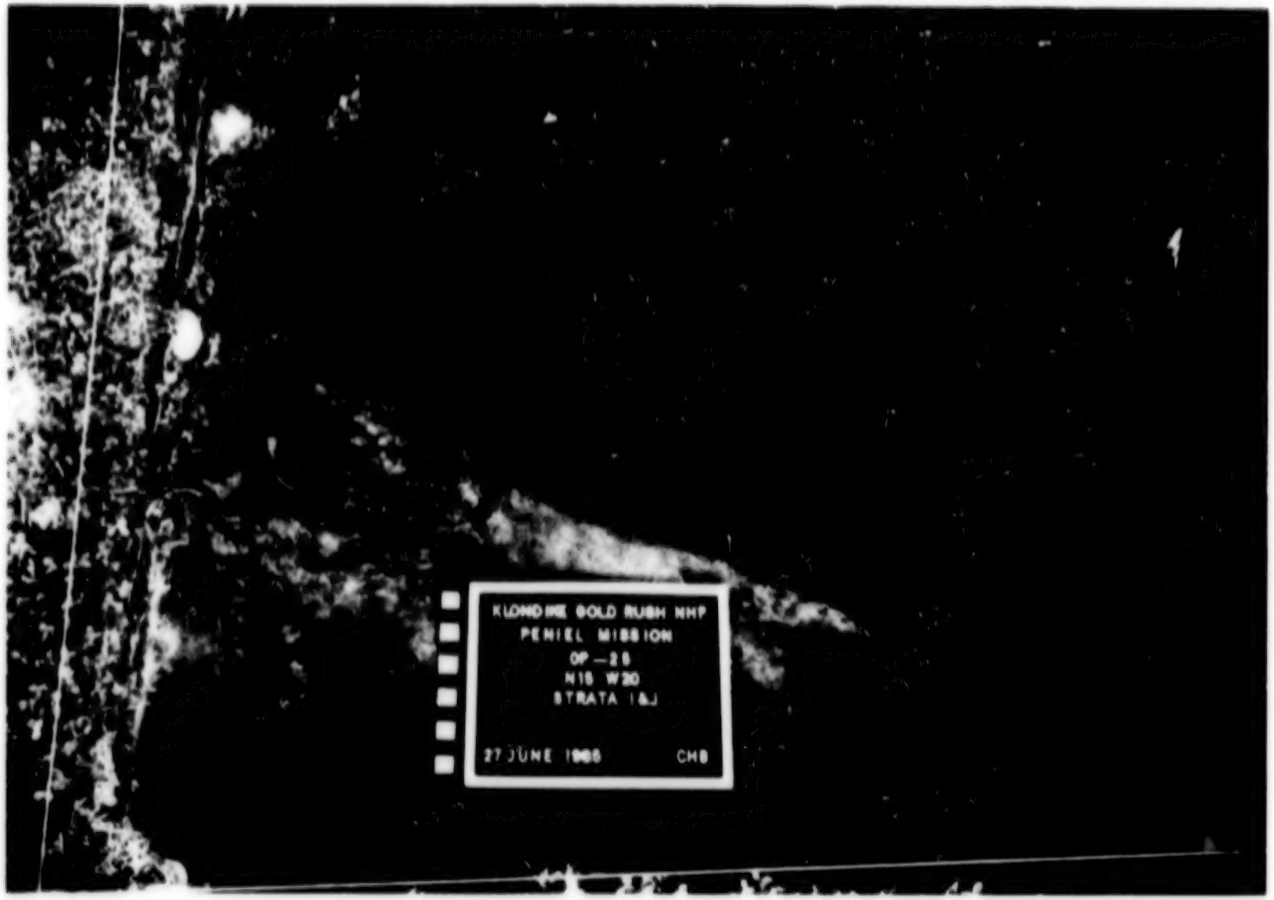


Figure 4.13: Plan view of excavation unit 25-B, looking down and north.

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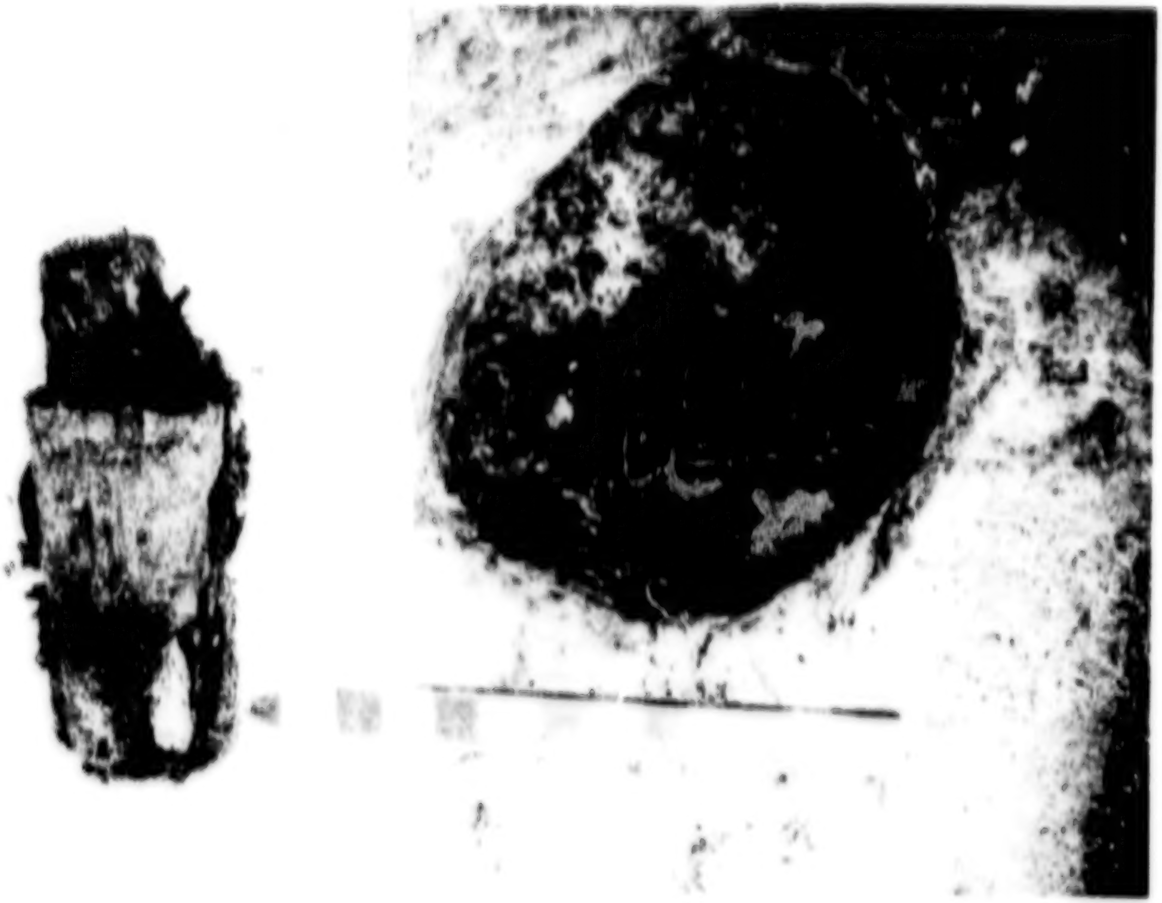

Figure 4.14: Feature 202, post and post mold.

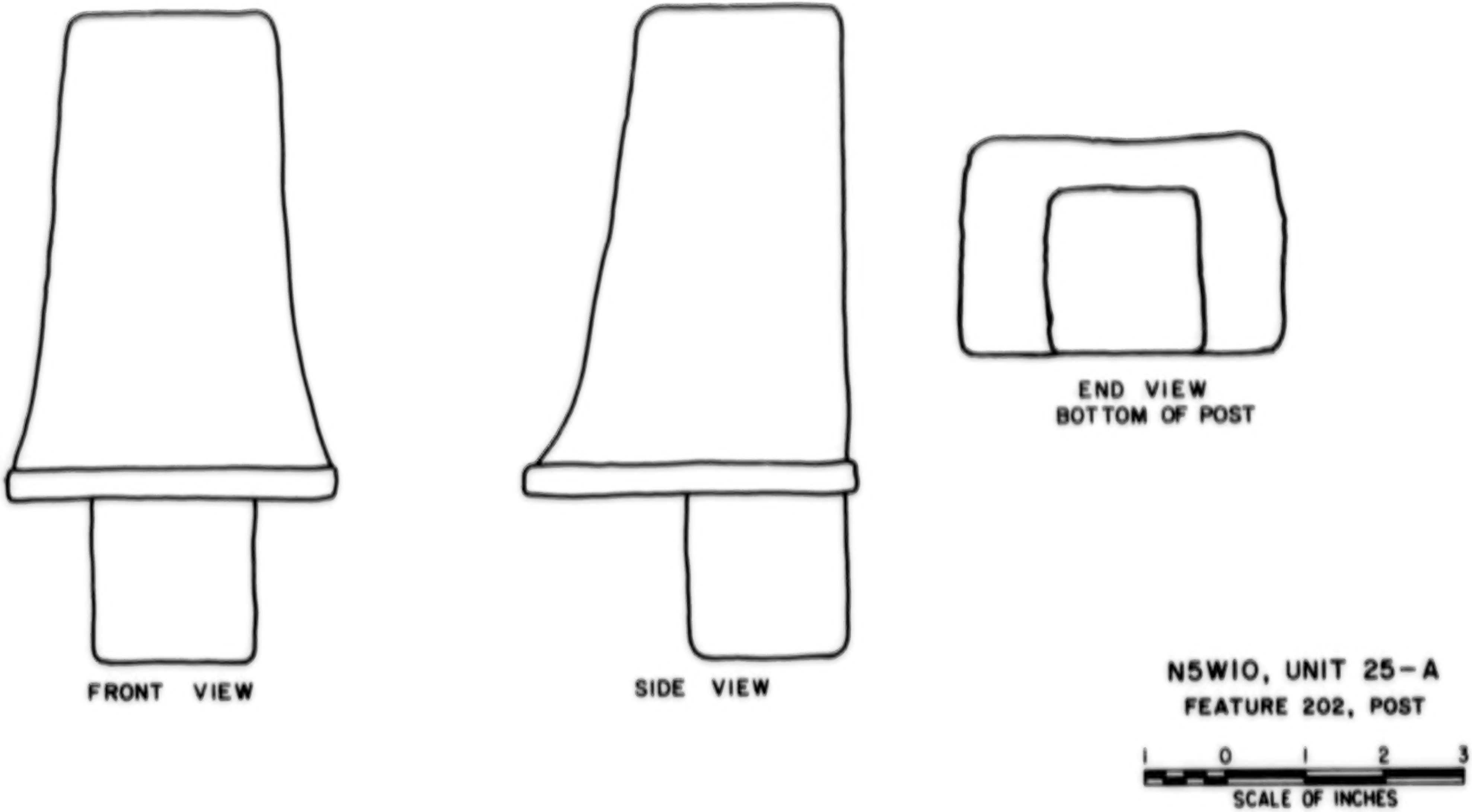

Figure 4.15: Feature 202, post.

top, the fourth side (vertical face) slants outward slightly, culminating in a small "lip" about 2.4 inches above the indented base. It is possible that the post was once much longer and the top rotted away, leaving only a short stub in the ground.

The post from feature 204 was even more deteriorated, and it was difficult to tell whether it was complete, or if it had a similar configuration. The post mold was defined by a slightly darker, stained area. However, patterning of stratum G soils around the post also suggests that the water may have flowed around the post and deposited silts at some point. It is possible that the small post hole was excavated through upper strata, then the post set into the hole and driven a short distance down into the silts and sands of stratum G.

When originally encountered, the burned materials of stratum E appeared to be concentrated in a large lens in the northeast corner of unit 25-A. The colorful artifact concentration in the lens (white calcined bone, rusty cans, red brick, pink and grey and black cinders and coal, ceramics, and colored glass) was surrounded by a dark grey sandy silt with organic mottle. At first, this lens was treated as a feature (feature 203). After additional work, it became apparent that the entire level was composed of randomly located lenses of silt and sand interfingered with large concentrations of artifacts in a dark matrix (Figures 4.4 through 4.10). Although some of the silt and sand appeared to have been water sorted, the artifact pockets were, for the most part, extremely homogeneous. A wide variety of artifacts of different density like heavy pieces of metal and brick, fragile bone, wood and coal, were all mixed together in a solidly-packed matrix of burned materials consisting primarily of cinders. It should be noted that some of the artifacts had been heated or burned, but generally the burned items were mixed indiscriminately with the rest of the materials. Along the eastern wall of the unit, close to the top of the stratum, was a thin layer of badly decomposed orange pastey brick and brick fragments.

In unit 25-B, Level V was divided into three separate strata, Stratum H, Stratum G, and Stratum E (Figures 4.4, 4.7, and 4.10). Stratum H, which overlay stratum J in the northern portion of the unit, was arbitrarily divided into two levels to facilitate excavation. Both levels of stratum H contained great numbers of artifacts which were mixed with pockets of coal, charcoal, and partially burned wood in a mottled, heavy sandy silt containing numerous dark red streaks from decomposed ferrous metal. There were also a few pockets of loam, usually in association with burned materials and artifact concentrations. Although artifacts were found throughout the stratum, concentrations seem to be most dense in these pockets, in association with miscellaneous cut ends of lumber.

The artifact concentrations were especially heavy in the northeast corner of the unit, that is, in the deepest part of the exposed creek bed. There were so many artifacts that following water screening, virtually everything left in the screen was artifactual. Stratum H soils became increasingly silty and wet towards the base of the stratum, requiring water screening approximately 4 inches into level 1. The silt had a great deal of clay content.

Stratum G, immediately above stratum H, appeared to be a continuation of stratum E which was interlensed with stratum F. Stratum G was, however, a somewhat different color (orangish and yellow-grey cinders) than stratum E, and appeared to have sightly more silt and loam in the matrix. Several large angular granitic boulders were found in stratum G.

The upper portion of stratum E covered most of the unit. By the bottom of the stratum, these deposits tapered towards the north to occupy only the northeastern two-thirds of the unit; stratum F was visible across the southwest corner of the unit (Figure 4.13). Like similar strata in the other excavation units and the test trench in Op. 20, stratum E in unit 25-B was composed of a solid layer of reddish-grey cinders, ash, and charcoal mixed with less than 20 percent silt. There was no patterning in the artifact mixture, but there appeared to be quite a lot of burned construction materials included in this layer. In composition this stratum was virtually identical to stratum E in unit 25-A, but was slightly more pinkish in color. This was probably due to the presence of decomposed brick in unit 25-A.

A small angular depression of undetermined origin, measuring about a foot square, was visible at the top of stratum E in the northwest quadrant of the unit. Features 205 and 206 were included in this stratum. Feature 205 was a round charcoal stain found in the central portion of stratum E. Feature 206 was a thin sandy loam lens encountered midway through stratum E along the north wall of unit 25-B.

In Unit 25-D Level V was composed of mottled fine sandy silts with a high artifact, coal and cinder content, identical in composition to the trash deposits in the units discussed earlier (Figure 4.4). Based on differential compaction and evidences of disturbance in the wall profiles, Level V was arbitrarily divided into two vertical sections (stratum D and stratum E) by a line roughly perpendicular to the north wall of the unit (see north profile, Figure 4.9). The more compact, undisturbed portions of the trash deposit were designated stratum E. The compacted trash in this layer was very difficult to excavate since large quantities of rusted tin cans were crushed among the coarse debris. While the looser deposits in stratum D were virtually identical in artifact content, they were easier to excavate, suggesting they had been disturbed once before.

A 0.22 foot diameter rusted ferrous pipe, probably part of a longer line, ran through stratum D along the eastern edge of the unit, almost parallel to the east wall (Figures 4.8 and 4.16). Collapsed sections of redware sewer pipe were visible beneath and beside the ferrous pipe in the north and south walls of the unit (Figure 4.9). Although a few pieces of ceramic pipe were found in stratum D (along the east side of the unit) it appeared that much of the original pipe had been removed. Of course, the possibility remains that the pipe visible in the unit walls

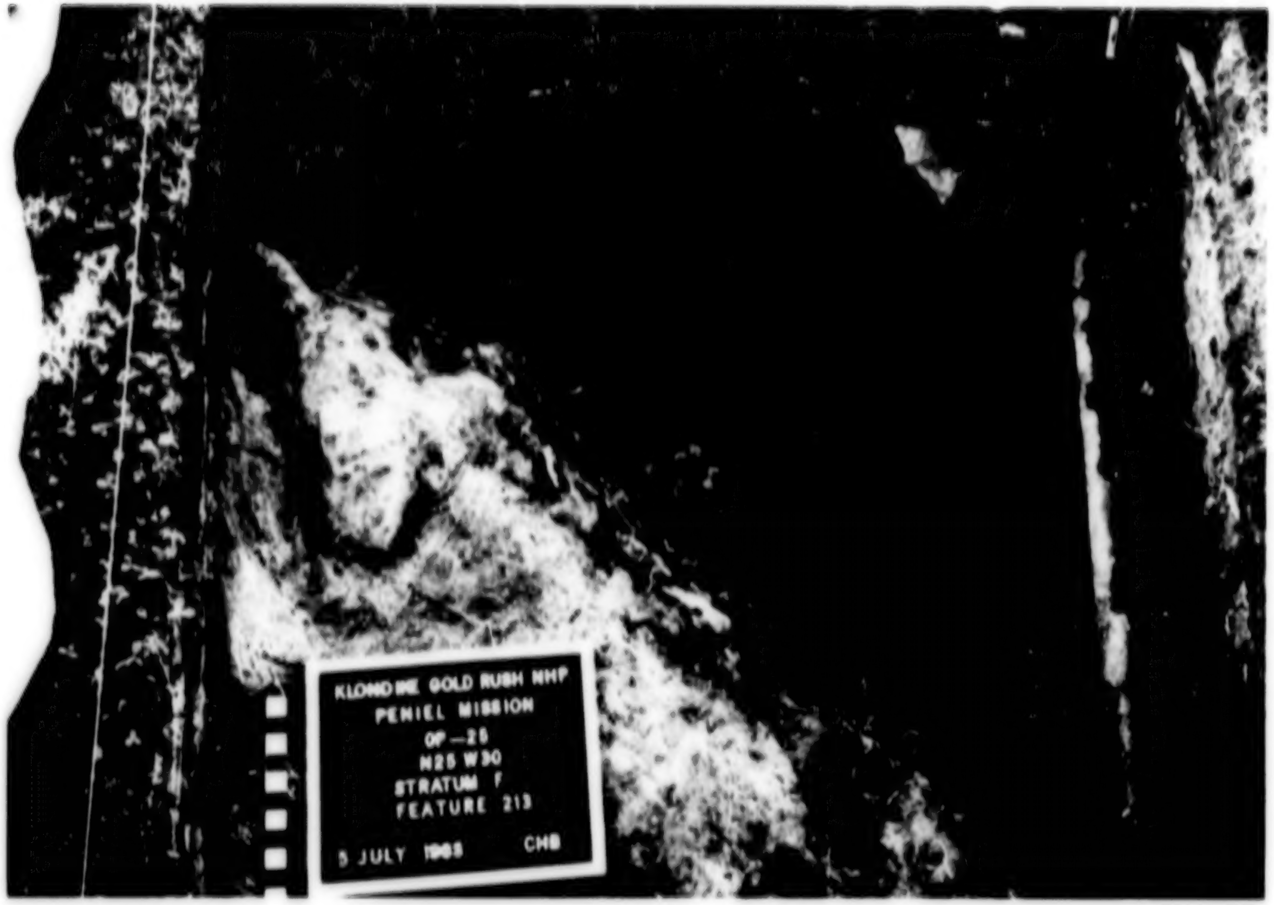

Figure 4.16: Plan view of excavation unit 25-D, looking down and north.

was only an unused segment thrown into the dump. However, based on stratigraphic indicators, it seems logical to assume that intrusive excavations (for the metal and/or ceramic pipes) had impacted the eastern one-third of the unit (see north and south wall profiles in figure 4.9). It is not known when the pipes were laid, and the presence of numerous organics and sand lenses and heavy tree roots confused and obscured much of the upper strata. The pipes may have been associated with post-1900 plumbing work for building I.

A large deposit of a whitish, powdery material resembling coarse plaster or finely crushed rock, but with an odor strongly suggestive of soil paint, was present in the north and east walls and in scattered nodules throughout stratum D. A small loose piece of pipe extended out from the east wall of the unit in the middle of the white deposits. It is estimated that there was nearly a bushel of this whitish chalky material embedded in the east wall of the unit. Numerous water rounded granitic cobbles were also present in stratum D.

Large pieces of window glass (included with the ceramic and metal pipes as feature 213) lay at about a 45 degree angle on the edge of the creek bank at the interface between strata F and D. The various artifacts in feature 213 appeared to be less consolidated than adjacent materials in stratum F, so they have been included with stratum D (disturbed) items in the final analyses. To the northwest, beyond the window glass deposits, a fine film of ash and water sorted materials curved around the interface between stratum F and the looser materials in stratum D, close to the arbitrary boundary of stratum E. Since they were undisturbed, artifacts found in this water-sorted lense were included in stratum E.

Shallow, slanted curvilinear depressions were cut at fairly regular intervals into the leading edge of stratum F, just above the drop into the creek bed (Figure 4.16). It appears that these depressions represent shovel impressions, probably made during excavation and backfill of a trench for the pipe(s) that paralleled the eastern edge of the unit.

Transitional Deposits (Level IV)

Level IV was a transitional level containing highly variable deposits (various permutations of humus, loam, cinders, silts, and sand) irregularly distributed across the site. In many instances, the deposits appeared to have been mixed and/or disturbed. Some of the deposits from Level IV appear to be unevenly distributed fill of unknown origin which served as transitional strata between the trash deposits/creek bank and more recent silts containing sheet trash which built up around the Peniel Mission during the twentieth century. Other deposits in Level IV were likely to have been created by site leveling operations conducted shortly before construction of the Peniel Mission and/or building I. In several areas, this level was very dark and humic, as if low, damp, moss-filled areas had been buried by leveling activities or by water/airborn silts and sands.

In the test trench (Operation 21), the very dark greyish brown humic soils of Level IV graded into the concentrated creekbed trash deposits of Level V, especially in unit 21-D (Figure 2.2). In this area, the surface of Level IV undulated widely, appearing to be a buried humus layer which also graded into the grey, sulfurous smelling sands above.

In test trench sections 21-A and 21-B, this transitional level graded into grey sand before hitting the cinders and artifacts of Level V. In unit 21-C, stratum D (Level IV) was missing for much of the unit; the red cinders were not clearly delineated, and the level seemed to merge into Level V. Since stratum D was excavated down to the solid red/grey cinders of stratum E, some of the artifacts in stratum D may very well belong to the burned layer (Level V) below. A number of tin can fragments were found at the interface between these two levels.

In unit 25-A, Level IV was thin and uneven, and did not entirely cover the unit in some places. Here this level was made up of compact mottled sandy soil containing modest amounts of pea gravels. In the lower part of the level, the soils graded from a tan sandy silt in the south portion of the unit to a grey sandy silt in the northern part. The end of Level IV marked the point where the sharp vertical division between the relatively sterile sandy silt of the creek bank (Level VI) and the dark artifact laden trash deposits (Level V) began to emerge.

Level IV in unit 25-B was composed of scattered cobbles and mottled soil of approximately 50% red and grey cinders and ash, 30% loam, and 20% greyish brown silt. The excavated surface of stratum D was very uneven, and often hard to define. In places across the site, especially in unit 25-B, Level IV appears to be a mixture of fill and trash deposits from the stratum below. There may have been some measure of secondary disturbance to the more modern upper strata in this unit, but its extent is unclear.

In unit 25-D, some of the humic materials from Stratum C may well belong to this level, but secondary intrusions from previous trench excavations and roots have confused the interpretation of the strata, making precise definition of this transitional level (Level IV) impossible.

Post-1900 Deposits (Levels I through III)

Levels I through III make up the post-1900 deposits. These levels were composed of the sheet trash and alluvial/aeolian soils which built up gradually from the turn of the century to the 1980s.

Level III. This post-1900 level, which overlies the mixed deposits of Level IV, contains the sheet trash and soils built up over the first three quarters of the twentieth century. This level is somewhat variable in composition but it extends across the entire site, unlike the trash deposits of Level V which were found only in the creek bed.

In the Operation 21 test trench, Level III was a dark grey sulphurous smelling sandy silt/loam with some thin layers of humus intermixed. A banded effect suggested that parts of this layer were of alluvial origin. A well-integrated reddish stain (part of the stratum) appeared in Unit 21-B; it was no doubt deposited at the same time as the level. Most of the artifacts appeared at the interface of Levels IV and III.

Feature 46 was encountered in Level III in unit 21-B. This shallow hole, bisected by the west side of the test trench, contained fill mixed with red/grey cinders from the strata below. Obviously the hole was dug, then refilled with mixed excavated materials.

Feature 47 was also first encountered in Level III, and intruded below the end of the excavation. This feature, a narrow trench, contained very loose mixed soils composed of sand, pebbles, silt, and generalized brown mottled fill. The feature led west away from the Peniel Mission, and truncated the cinder dump. Nothing of interest was found in the feature.

Stratum C, features 201 and 202, and a dark humic lens make up Level III in unit 25-A. Here Level III was a mottled sandy silt containing small lenses and pockets of sand and humus, gravels, roots, and iron stains. A dark soil lens that extended into the unit from the northeast corner was used as a convenient arbitrary line to divide the stratum into two levels (Figures 4.4 and 4.10). Just above an below the lens, several pieces of a flexible mat-like material, probably decomposed beaver board, extended from the southwestern quadrant of the unit towards the center of the east wall. Other small pieces of this material were scattered throughout the stratum which also held a variety of domestic and structural artifacts. A yellow metal female "T" pipe fitting measuring about 1 inch in diameter (interior dimensions) was found in the east wall of unit 25-A. This fitting appeared to be attached to a section of pipe. The pipe was not plugged, and its original use and destination are unknown.

Beginning with Level III, the strata in unit 25-B dipped towards the northeast. Soil color also changed gradually from dark grey brown to a dark reddish brown as the proportions of combustion products and rusty metal increased. The lower portion of Level III (Stratum C) was a mottled, possibly disturbed soil consisting of approximately 30% sand, 30% silt, 30% loam, and 10% reddish-grey cinders. The soil was somewhat more densely packed and had a higher silt content than stratum B, but had an uneven surface and the appearance of fill. The upper portion of Level III (Stratum B) was composed of a lightly packed combination of approximately 50% fine sand, 20% grey alluvial silt, 25% humus, and 5% cinders. The stratum contained a few small rocks ranging in size from pebbles to tennis-ball size, and numerous intrusive tree roots.

Because of post-deposition disturbance to unit 25-D. Stratum B and Stratum C appear reversed in sequence along the north and south walls of the unit (Figures 4.4, 4.8, 4.9). Level III in this unit (Stratum B) was composed of fine dark grey brown mottled silty sands and pea gravels. Tree roots riddled the stratum. In the central portion of the unit, darker soils associated with the heavy tree roots extended down well into the next level.

Feature 209 was at the interface between Levels III and II. This badly deteriorated, linear, somewhat angular piece of wood ran from the south wall of the unit directly north about one-half way across. Tree roots had grown into and around the wood, helping to obscure its original shape.

Level II: This fairly thin humic layer, which extended across the site, was the previous ground surface whose rotted sod and vegetation was covered over by fill imported in the recent past to level the lawn area near the Peniel Mission.

Level II (Stratum B) of the Operation 21 test trench contained fill and humus with numerous roots. About 20 percent of the fill consisted of pebbles; some dead grass was found on the surface. There was a slight dip in the upper surface of stratum B diagonally north/south across the trench at the sound end of unit 21-C adjacent to shovel test L.

In unit 25-A the black humus of Level II (Stratum B) smelled like sewage. The level gradually thinned and blended into stratum C.

The dark sandy humic soils of Level II in unit 25-B (Stratum A) contained post-1940 artifacts mixed with pockets of silt, sand and cinders, some of which may be scattered remnants of the screening from the previous trench excavation. The soil graded slowly from one type to another with poor definition, and strata were undulating and uneven.

At the top of Level II in unit 25-D, black organic soils covered most of the unit except the southwest corner where a sand lens and/or the sandy silts of stratum F were exposed. In the central portion of the unit, the humus (stratum C) continued on down diagonally to merge gradually into stratum D (see north and south profiles of unit 25-D, Figure 4.9). Stratum C was very thin toward the eastern edge of the unit, where the beginning of the creek bank/division soon became apparent, and the disturbed trash dump of stratum D emerged. Humic soils of stratum C were indistinguishable from the humus along the heavy tree roots and disturbed areas of stratum B.

Level I: This uppermost level was composed of patchy sod and moss over sandy, gravelly fill. The fill was reported by the maintenance crew to have come from under the White Pass and Yukon Route Railroad Depot when that building was renovated by the National Park Service in 1982 (Simms 1983). This unconsolidated fill was somewhat unevenly distributed across the site, resulting in a rather hummocky ground surface.

In the Operation 21 test trench, Level I (Stratum A) was composed of a dark greyish brown sand and pebble fill. In the adjacent unit 25-A this unconsolidated fill and patchy sod level was somewhat unevenly distributed across the unit. A thin lens of black humic soil containing modern construction debris appeared at the interface between Levels I and II (strata A and B). This lens was designated as feature 200 in the field; see a further description in Appendix B. The few artifacts recovered from the lens were lumped with strata A since they were apparently on the old ground surface (stratum B) when the more recent fill was added.

Level I was absent in unit 25-B; in unit 25-D this topsoil (stratum A) was a mottled brown gravelly loam fill riddled with intermittant grass and tree roots.

Excavation unit 25-C (N30W10): This unit was excavated into fill composed of heavy concentrations of construction materials, occasional household items, gravel, and cobbles in a sand and silt matrix (Figures 4.6 and 4.9). The excavated soils were divided arbitrarily into two strata--Stratum A and Stratum B. These strata were distinguished only by the amount of consolidation; stratum A was somewhat looser and less compacted than stratum B and stratum A contained proportionately more topsoil and fewer cobbles. At about a foot below existing grade, it became apparent that the fill soils continued on down without change, so a test hole measuring 0.8 foot in diameter was dug in the northeast corner of the unit. The test hole continued down through densely packed cobble/gravel/sandy soils to about 2.4 feet below surface where a charred board partially blocked the hole. Soils just below the board were saturated with water. Excavation was halted at 2.5 feet below existing grade but the same uniform silt/cobble/sand fill appeared to continue on downward. Dark oily stains and sand lenses were found in stratum B along with a saw blade that extended out from the center of the west wall at the top of the stratum.

Shovel tests, A-J, Operation 20, 1983. During the 1983 testing project, thirteen shovel tests were dug in the proposed waterline corridor. They were each approximately 10 inches in diameter, and were dug to sterile silt and pebbles; locations and stratigraphic profiles of these tests are illustrated in Figures 2.1 and 4.5. While exhibiting some individual variation, strata in shovel tests 20-B through 20-F were generally similar. The sterile silt and pebble stratum was overlain by a fairly uniform loam deposit. Above this was a thinner deposit of pebbles, sand, and/or coal. The top three to four inches was composed of a humic material.

In shovel test 20-G an additional level of sandy fill overlay the humic stratum; the rest of the test was similar to those described above (Figure 4.5). In tests 20-H and 20-I, a humic stratum overlay the loam, just above the sterile silt/pebble layer.

Shovel tests 20-J through 20-M were excavated into the trash deposits of the Mill Creek stream bed. The previous discussion of the Operation 21 test trench included a description of the strata in this area. Shovel test 20-N contained only mixed sand and pebbles from the Peniel Mission builder's trench.

Six more shovel tests were dug during the 1985 testing project in an attempt to determine the extent of the trash dump. These tests, numbered Operation 29-1 through 29-6, are illustrated in Figures 2.1 and 4.6 through 4.8. The lowermost level of shovel test 29-1 (located at N27.5W27.5) contained a very dark grey wet silt; above this was a sandy humus/cobble/artifact concentration, no doubt a continuation of the trash deposits found in the adjacent test excavation (unit 25-D). Sand and silty humus overlay the heavy artifact deposits of this test.

Just east of unit 25-D, a second shovel test (Op. 29-2 at N22.5W22.5), revealed strata almost identical to that found in test unit 25-D (Figures 4.7 and 4.8; i.e., fine grey silts were overlain by a colorful cinder/artifact/coal/loam mixture. The upper levels were sand and loam. Heavy intrusions of roots in the upper 2 feet of the shovel test complicated its excavation. Less than a foot of shovel test 29-3 (N17.5W22.5) was dug through humus, sod, and sand before the test was halted by a large boulder. The gravelly boulder-filled soils in shovel test 29-4 (N22.5W7.5) were identical to the mixed fill found in the adjacent test unit 25-C.

The loam and silt levels found in shovel test 29-5 (N17.5W7.5) are similar to the deposits found in the 1983 shovel tests 20-H and 20-I, with the exception of the uppermost level of loam and river cobbles which is probably fill of more recent derivation.

Shovel test 29-6 (N17.5W12.5) encountered the creek channel trash deposits; its strata are strikingly similar to those in the adjacent test unit 25-B. Note that the shovel test reached the sterile cobbly streambed at about 2 feet below present ground surface.

SUMMARY AND CONCLUSIONS

While the Operation 21 test trench and each of the individual shovel tests and excavation units exhibit unique characteristics, six stratigraphic units reflective of different time periods and depositional processes can be traced across the site from one excavation unit to the next (Figure 4.4). The first or lowermost (Level VI) is composed of culturally sterile alluvial deposits associated with the Skagway River valley; these deposits were laid down over the past two or three thousand years.

The next stratigraphic unit, Level V, consisted of interwoven cultural debris--dumped trash--and alluvial soils. This unit was created in a very short period of time--most likely between fall, 1897 and spring, 1900. Level IV contained mixed, disturbed, variable strata which lay between the trash dump and the more well-defined twentieth century sheet trash deposits.

The fourth stratigraphic unit, Level III, is made up of sheet trash gradually deposited over the next 75 or 80 years. Overlying this unit were the modern topsoils and fill soils from the 1980s, Levels II and I respectively.

It is evident from examination of Level VI strata that a number of natural processes (flooding, stream sorting, inflation/deflation of sandbars, banks, etc.) were at work in this area during the years pre-dating the Gold Rush. The sorted coarse sand, gravel, and cobbles of Level VI overlie or are interbedded with dark silts and embedded water-worn riverine cobbles. These culturally sterile alluvial materials represent the sand and gravel bars and other sorted deposits resulting from Mill Creek's cutting and filling activities in the more recent past, as well as from earlier Skagway River erosional processes, outwash from the steep mountains that ring the valley, and episodes of high tide. The color of the alluvially deposited silts and sands often varied from grey to tan. Different kinds of original deposition--glacial streams, Mill Creek (spring fed), and deltaic deposits from the Skagway River--may have contributed to these color differences; or they may simply reflect differential rates of oxidation.

Sometime during the Gold Rush, and definitely before fall, 1900, much of the westernmost branch of Mill Creek was filled in with local garbage and trash, creating Level V. However, in many cases, the trash did not form a solid block of deposits. Rather the intermittantly deposited trash was covered over by and intermixed with alluvial silt and sand lenses along with driftwood and humic lenses. This depositional patterning is consistent with periodic trash dumping and episodic flooding and silting from stream activities and high tides. For example, photographs of Skagway taken in October, 1897, show the streets and boardwalks covered with water and floating debris brought in by an exceptionally high tide. Other period photographs show a great deal of trash piled around buildings, and in streets and gullies.

It is likely too that before the dump was covered over, there was a great deal of secondary mixing of the dumped materials resulting from human activities, scavaging by dogs, and the effects of wind and gravitational movement of loose debris downslope. If livestock were not penned away from this area, their trampling may have contributed to the mixing process.

On the other hand, large sectors of the dump--particularly areas in the deeper portions of the creek--exhibited very little sorting, and contained a fairly homogenous mixture of a variety of cultural materials of differing densities. The gentle slopes of these strata suggest the natural configuration of a relatively undisturbed trash heap. We must conclude then that in many areas mixing was fairly minimal, and that the stream bed was probably not carrying a lot of water at the time of deposition. Alluviation and silt infill among the compacted artifact mass were most likely the result of more sporadic events such as high tides or backwater during a period of heavy spring runoff.

The highly colored trash deposits from this dump were found in three of the excavation units, the Operation 21 test trench, and several of the shovel tests. Color variations among otherwise identical strata within the trash in the test trench and test units 25-A, 25-B, and 25-D, may be due to differential proportions of trash and/or local burning activities. For example, deterioriating brick in unit 25-A left much of the trash with an orangish veneer. Heavy deposits of cans in other areas colored many of the adjacent artifacts and gave the strata a rusty appearance. Pink colored cinders in unit 25-B probably resulted from a very hot fire.

Most of the disturbance in unit 25-D can probably be attributed to excavation for utilities for building I. This excavation probably occurred some time between 1903 when the new municipal water system was installed, and 191_ when building I was removed from the site. The broken window glass in feature 213 may date to this event, or may have been part of the original trash deposits. The water-rounded cobbles in the disturbed strata D were probably part of the original materials removed from the creek bed when the pipe was laid. When the pipe trench was backfilled, the rocks were tossed back into the hole somewhat above their original context.

It is probable that all or part of the creekbed trash dump/fill sequence exposed by units 25-B and 25-D and the immediately adjacent shovel tests was created early in the Gold Rush, before construction of building I, and perhaps before erection of the small shed shown in contemporary photographs (Figure 3.1). Building I was built between January and April of 1898 a short distance west of the later location of the Peniel Mission, on the very edge of the creek bank just west of Moore's fence line (Figures 3.1 and 3.4).

It may be that just prior to this period the creek was diverted slightly towards Moore's property to the east. Composites of several Gold Rush period maps and plats show discrepancies in the stream location (figure 3.22). At first these deviations were thought to be due to mapping errors, but they may also be related to changes in the stream course early in townsite development--prior to construction of building I. Deposition of trash could in itself helped to deflect the stream course.

Overlaying the trash deposits of Level V was a highly variable transitional level composed of silts, loam, decomposed organics, cinders, and artifacts. In varying proportions across the site. These strata were uneven and sometimes disturbed. They lay between the concentrated Gold Rush period trash deposits and the more clearly definable twentieth century sheet trash.

The Level IV variations in depositional layers and artifact content can be attributed to several factors. First, given the scope and extent of this testing project and the probable ground disturbances associated with construction and remodeling of the Peniel, it was impossible to define the precise location of building I, or the area of the dump it may have covered. It is unclear whether building I was built directly atop trash deposits, or if the area had been filled before construction, perhaps even before construction of a small shed seen in historic photographs. Neither is it obvious whether the western portions of the dump pre-dated the deposits found beside the Peniel Mission. It is possible that trash deposits immediately adjacent to the Penial Mission continued to accumulate for two years following the construction of building I. The amount of fill brought in to level the Peniel site, and the amount of related site disturbance are also unknown.

Uneven distribution of trash deposits in the old creek channel and subsequent depositional infill due to flooding and to the construction of buildings I and F, along with a number of appurtenant structures, two years before building of the Peniel may have contributed to the mixing and disturbance of the surrounding land. In addition, trash piles in the creekbed would generally have had gently mounded surfaces. Site leveling activities, excavation for footings, and construction activities would tend to top off the mounds, and mix imported from other less developed areas of the Skagway valley. Clearing activities and construction of the Peniel Mission in 1900 would also have affected the area just outside the perimeters of building I.

Judging by historic photographs, the stream bed/dump site under and around the mission was leveled sometime shortly before its construction (compare figures 3.3 through 3.5 and 3.7). However, it is probable that the ground surface under and around building I and the Peniel Mission was somewhat uneven due to subsidence of the trash deposits and continued flooding along the stream course. Low areas would collect water, promoting plant growth, especially around the perimeters of the two buildings. Following a high tide or backup of stream drainage due to ice, organic debris would tend to accumulate in low, weedy areas. The variable organic deposits of Level IV may be due to some of these processes. For example, high tides flooded Skagway in October, 1901. Some of the dark organic "cover" found at the top of this level may have been left when the tidewater receded.

The angular granitic blocks, up to 18 inches square, found in unit 25-B contrast with the rounded stream cobbles. These blocks were not visible until the mid-point of the trash dump. A concentration of cinders appears in the general location above one of the large stones in stratum C, but there is no evidence of disturbance above the second/third stones.

There are a number of equally plausible explanations for the presence of these blocks in the trash dump. For example, they may have been used as footings for some sort of building. Depending upon the location of building I, it is highly possible that the stones found in unit 25-B were footings for building I, originally set into an older portion of the trash mound. The stones may have also been related to some sort of lean-to or adjoining outbuilding.

It should also be noted that a small structure of unknown function was located in the approximate vicinity of the testing project (Figure 3.1). If these blocks were associated with this small building, they could have been set into a shallow accumulation of trash dumped into Mill Creek before its eastward shift(?). Additional trash may then have built up around the stone pilings or accumulated in the empty space after removal of the small building but prior to construction of Building I.

Alternatively, the stones may have been deposited here sometime during the clearing for the building I construction or the filling of the creek bed. Or, they may have been dumped here as part of the regular trash deposits. These blocks may have served as supports for an early footbridge across the creek. Although it is remotely possible that the stones may have provided some sort of base for a board walk, they appear to be too heavy, and are in the wrong place.

Although historic photographs do not show the foundations of building I, it is likely that the footings for this structure were of this type of stone, and that it was raised a foot or more off the ground. It is possible that this building was constructed directly over a portion of the trash dump without the addition of much if any fill. Because Building I was not removed until the first or second decade of the twentieth century, bottles and other incidental debris may have continued to collect beneath the structure until that time. This debris would have been included with the transitional deposits of Level IV.

While the precise on-the-ground location of the hipped-roof building (building I) is not known, it is clear from the historic photographs that it was fairly close to the Peniel Mission (Figures 3.16 and 3.17). It is unlikely that large amounts of trash would have been deposited directly beneath the structure, or that very much sheet trash would have accumulated there until after its removal in the twentieth century. However, if there was a pathway or boardwalk between building I and the Peniel Mission, artifacts probably collected along the walkway, and the relative positions of the two buildings would have shaped the nature and extent of the sheet trash deposits.

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Once building I was in place, it is not likely that much sheet trash would have built up on the east side of the structure. That is, its location immediately next to Moore's fence and the drop-off into the creek bed would have prevented most incidental foot traffic (Figure 3.4). However, it appears that the undeveloped creek bed was readily accessible for large scale trash dumping prior to construction of the Peniel Mission, and unfilled areas of the creek bed closer to the Moore residences may have had continued use well into the twentieth century.

The Moore fence line was somewhere in the vicinity of the Peniel Mission excavations, and Features 202 and 204 may have been fence posts associated with this line. The posts are quite close together (less than 5 feet on center).

These posts may alternatively have been supports for a boardwalk. Photographs taken shortly before construction of the Peniel Mission show a boardwalk around the north and east sides of Building I; this boardwalk may have continued between the newly constructed mission and the adjacent hip-roofed building (Figure 3.7).

After 1900, there was a gradual accumulation of sandy humic silt deposits characteristic of an open yard situation around the perimeter of the two buildings. The grey, smelly sands found in Level III of the Operation 21 test trench and excavation unit 25-A probably represent the combination of organic materials and water standing in low areas that produces a boggy odor.

Features 46 and 47 were created during the post-1900 period. Feature 46 appears to be nothing more than an unexplained hole containing mixed fill. While feature 47 may have been part of a builder's trench, it also may have been the westward extension of a drainage trench or even an abandoned water or sewer line, dug some time after the Peniel Mission was built. This feature may also be related to, or the edge of, an excavation for a septic tank or cess pool. It was found that deposits in a nearby excavation unit (25-C) were composed entirely of fill to a depth of 2.5 feet, suggesting the presence of a fairly good-sized excavation in this area.

The cinder/artifact content of Level III in unit 25-B could have resulted from several factors. Cinders and other combustion products may have been used to firm up muddy soils in the area between the two buildings. Coal may have been dumped and/or stored here. From historic data we can posit that building I was removed sometime between 1910 and 1915. Some ground disturbance may have occurred with the removal of this building, and the cinders associated with lower levels could have been exposed during the project. Cinders may also have been scattered during the 1930s remodeling project. Unfortunately, the builder's trench excavated around the Peniel during the 1930s foundation replacement obliterated much of the 1900 association between the Peniel and the earlier trash deposits.

CHAPTER V: DESCRIPTION OF THE ARTIFACTS

CHAPTER V: DESCRIPTION OF THE ARTIFACTS

INTRODUCTION

Excavations at the Peniel Mission uncovered a variety of artifacts representing a number of different functions. These items range from glass and ceramic sherds, to construction materials and personal items like buttons and umbrellas. Of particular interest are the artifacts that reflect the specialized activities occurring in the town of Skagway during the Gold Rush era.

ARTIFACT CLASSIFICATION

Where possible, artifacts from the Peniel Mission excavations were classified by function, using a system devised by Catherine H. Blee. Use of this classificatory scheme not only provides a sound basis for artifact interpretation, but helps to maintain continuity with previous archeological work in Skagway (Blee et al. 1984; Blee 1983b; Blee 1987). As described by Blee (1987:27-31), these artifact groups are as follows:

I.	Structural	All items that were associated with the physical presence of a building or other structure. They may have been used in its construction, operation, or upkeep, or resulted from its demolition.
II.	Domestic	All artifacts which result from the daily routine operation of a household, and which tend to have been owned and/or used by most of the members of the household. They include the storage, preparation, serving, and consumption of food and beverages. Furnishings and pharmaceutical items are included here also.

III.	Personal	Those items which were most likely to have been privately rather than corporately owned, and which may have been carried around on one's person (e.g. clothing, personal ornamentation, and grooming items).
IV.	Activities	All artifacts which might have been used in specialized activities which occur outside "normal" household routine (e.g. military buttons, ammunition, printing equipment, and bulk storage.
V.	Ambiguous	Items that may have been used more than one way. As an example, cloth could have been used for clothing or an umbrella (Personal Group), or upholstery, rugs, tablecloths, bed linens, curtains (Domestic Group).
VI.	Unclassified	Items whose function cannot be determined, and whose manufacturing date, origin, and method are unknown.

Groups V and VI are comprised of artifacts that could not be classified by their function. As Blee et al. (1986:44-95) describe Group V:

> In all cases included in this group, the material from which the artifact was made can be easily identified. A great deal can be deduced about its structure, the technology required to manufacture it, and possibly even the time period in which it was made. For this reason, despite our lack of knowledge concerning their function, these artifacts do contribute to our understanding of the site, and should be considered separately from the next group, the Unclassified Artifacts.

Group VI is made up of miscellaneous anomalous artifacts. While their morphology can be described, little else is known of these artifacts, and their "function, origin and method and period of manufacture remain a complete mystery" (Blee et al. 1986:45).

Within each of these functional groups, artifacts are further subdivided into more specific classes. For example, window glass, nails, utilities, hardware, and building materials classes are included in the Structural Group. Further refinement and description of these classes is included in separate discussions of each artifact class. In the laboratory analysis, artifacts were described by their physical attributes--material, color, size, shape--and, wherever possible, by the maker and/or origin of the artifact and the manufacturing technology utilized. When feasible this information has been included in the artifact inventories (Appendix A).

ARTIFACT ANALYSIS

Each of the artifact discussions includes several sections. The first considers the Gold Rush period artifacts found in the Mill Creek Dump, i.e. those found in the lower strata (Level V) of the excavation units and the test trench. The second section discusses artifacts from excavated strata containing twentieth century deposits (Post-1900) (Levels II and III) formed after the Peniel Mission was built over the filled-in stream channel. Included also are descriptions of artifacts found in the Fill, the Mixed deposits, the 1983 and 1985 Shovel Tests, and materials from disturbed areas of Unit 25-D (DIST). The fill category includes stratum A (Level I) from all units and the test trench, and the contents of unit 25-C. The Mixed deposits are composed of Level IV in the test trench and units 25-A and 25-B. These deposits are kept separate because they are composed of a mixture of artifacts and combustion materials from the Gold Rush period dump, fill soils whose source is unknown, and possibly some post-1900 debris.

Because the shovel tests were excavated by arbitrary levels rather than natural strata, artifacts from these tests are discussed separately from those found in the excavation units. The artifacts found in strata D of unit 25-D are also discussed in a separate section because of the probable disturbance and mixing which occurred sometime after their original deposition. Artifacts from feature 213 are combined with the stratum D items due to their location immediately adjacent to the disturbed strata.

The majority of the artifacts found are fragmentary in nature, so the artifact counts reflect the total number of sherds or pieces found, and are not a tally of complete items. Very little reconstruction of artifacts was undertaken. While a number of whole objects could conceivably be reconstructed from the recovered sherds, it is unlikely that all the pieces of any one item were recovered because only a few selected portions of the creek dump were sampled. In addition, the large numbers of sherds recovered make it too costly to reconstruct more than the most obvious or distinctive items.

STRUCTURAL GROUP ARTIFACTS

INTRODUCTION

The Structural Group encompasses a wide variety of construction materials and miscellaneous hardware commonly associated with the construction, maintenance and upkeep of a structure and its grounds. This group is subdivided into several classes, including Structural Materials, Hardware, Nails, Window Glass, and Utilities. Some interior hardware like roller blind parts and drawer pulls was placed in the Furnishings class. Tools found in the Peniel excavations are listed in the Activities Group since some items may have had uses not necessarily related to structural upkeep or construction. Tables 5.1 through 5.9 itemize and summarize the data to provide the reader with detailed information on artifact types, quantities, and provenience.

STRUCTURAL MATERIALS CLASS

This class includes brick, mortar, building paper, particle board, siding/roofing, tile, linoleum, paint chips, wallpaper, window glazing, and milled wood (Tables 5.1, 5.4, and 5.5). Most of the structural materials found in the Peniel Mission excavations are not diagnostic. Many of the items have changed very little in form or function since the turn of the century.

Brick and mortar were both counted and weighed to provide the best possible quantity estimate (Table 5.4). In excavation unit 25-C, only representative samples of brick, mortar, and coal were saved. The various types of building materials normally used in masonry and plastering are lumped under the term mortar. Included in this category are hard pieces of masonry (mortar) composed of a mixture of Portland cement, sand, and water; and pieces of plaster containing variable proportions of sand, water and gypsum or lime plaster. Mortar (plaster) stained by secondary burning is also included in this category. Some

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Table 5.1: Summary of Structural Group Artifacts

STRUCTURAL GROUP	FILL	GOLD RUSH	MIXED	POST 1900	STS 1983	STS 1985	F202 & 204	UNIT 25D DISTURBD.	TOTAL
Structural materials									
brick	1810	302	46	341	82	29	0	542	3152
building paper	11	0		2	0	0	0	0	13
composite wood product	1	0		6	0	1	0	0	8
linoleum	49	40	2	111	2	7	0	17	228
mortar	281	86	5	32	63	24	0	165	656
paint chips	11	0		13	0	1	0	0	25
siding/roofing	15	94		23	12	2	0	12	158
wallpaper	0	0		0	1	0	0	28	29
window glazing	8	0		11	0	5	0	0	24
wood, shaped	138	125	6	60	8	8	5	54	404
Hardware	15	236	13	43	7	7	0	26	347
Nails	320	3225	238	423	115	134	16	823	5294
Window glass	257	548	84	448	63	51	2	859	2312
Utilities									0
electrical supplies	2	34	0	4	1	0	0	0	41
heating	0	0	0	0	0	0	0	2	2
lighting, electrical	1	6	0	4	4	0	0	10	25
lighting, kerosene	20	548	2	73	3	36	10	368	1060
plumbing	1	8			0	1	0	190	200
road surfacing	0	0	1	1	0	0	0	0	2
TOTAL	2940	5252	397	1595	361	306	33	3096	13980

Table 5.2: Summary of hardware

HARDWARE CLASS	FILL	GOLD	MIXED	POST	STS	STS	UNIT 25D	F202	TOTAL
		RUSH		1900	1983	1985	DIST	&204	
Type									
bolts	1	1		2					4
brackets		1		1					2
carpet buttons		3							3
door and window	1	1		1			1		4
hinges		4	1		1				6
hooks		1			1		2		4
latches			2	1					3
misc. hardware		18		2		2			22
screws	1	21		6	2		3		33
spikes		2	1						3
springs		6							6
staples	2	12		2		1			17
strapping iron		10	1		1		2		14
tacks	1	68		9		3	3		84
washers	2	0		2					4
wire	7	88	8	17	2	1	15		138
									0
TOTAL HARDWARE	15	236	13	43	7	7	26	0	347

Table 5.3: Hardware inventory

HARDWARE CLASS		FILL	GOLD RUSH	MIXED	POST 1900	STS 1983	STS 1985	UNIT 25D DIST	F202 &204	TOTAL
Type	Description									
Machinery										
equipment parts	ferrous valve head and stem						1			1
										0
Hardware--General										0
bar	ferrous, square, 1-1/4 l. X 1/16 inches		1							1
bolt	ferrous, no threads, rnd head, w/washer		1							1
bolt, carriage	ferrous 3-1/2 X ?				1					1
bolt, carriage	ferrous, round head, 3 in. w/ nut, washer				1					1
bolt, lag	ferrous 6-1/4 in. w/nut, washer	1								1
bracket/brace	ferrous, obtuse bend, slotted				1					1
bracket/brace	yellow metal, flat, decorative, drilled		1							1
cable	ferrous 1/4 in. diameter		10							10
carpet button	ferrous, round convex head 1 X 1/2 inches		3							3
chain link	ferrous, oval, 1 X 5/8 in.		1							1
door knob	porcelain, ferrous shaft		1							1
door latch	barrel latch, bolt end			1	1					2
door latch	ferrous pieces, cupboard latch			1						1
door rim lock	ferrous, Japanned 4-1/4 X 7/8 rectangle				1					1
fastener	ferrous strap flange w/nail		2							2
hinge	ferrous, butt		1							1
hinge	ferrous, rectangular, cast geometric decor.		1							1
hinge	ferrous, V-strap w/machine screw					1				1
hinge fg	ferrous, type unknown, screw holes		1	1						2
hinge fg	ferrous, T-strap		1							1
hook	ferrous screw-in, no. 9, 1-1/2 in long		1							1
hook	ferrous drive-in, 2 inches long							1		1
hook	ferrous hook w/ eyelet							1		1
hook	ferrous strap					1				1
miscellaneous	ferrous rod/drift pin or tent stake						1			1
nut	ferrous hex cap nut, 1-3/8 X 1-1/4 X 3/4 in.				1					1
nut	ferrous, partial, diameter unknown				1					1
ring	ferrous, 5/8 in. diameter		1							1
ring	yellow metal, 5/16 in. diameter		1							1
rivet	yellow metal, 3/16 in. l w/ 3/8 in. washer		1							1
rivet/rove	yellow metal, 5/8 in. w/washer		1							1
sash cord fg	cotton? woven	1								1
sash pin	ferrous and white metal							1		1
screw	ferrous, partial		1			1				2
screw	ferrous, type unknown, 1 X ?				1					1
screw	ferrous, round slot(?) head, length unknown		1							1
screw	ferrous, shaft only, 1-1/4 X 12				1					1
screw, eye	ferrous, 3/4 in. long; 3/4 in. eye		1							1
screw, machine	ferrous round slot head 3/4 X 12 stove bolt				1					1
screw, machine	ferrous flat slot head 1 X ?							1		1
screw, machine	ferrous round slot head, 1-1/2 X 12		1							1
screw, machine	ferrous round slot head, 1-1/4 X 12		1							1
screw, machine	white metal slot head 3/4 X 12		1							1
screw, machine	ferrous pan head, 1/2 X 6							1		1
screw, wood	ferrous flat head 1-1/4 X 9		2							2
screw, wood	ferrous flat slot head 7/8 X 8		1		1					2
screw, wood	ferrous flat slot head 1 X 8		1							1
screw, wood	ferrous flat slot head 1 X 14		1							1
screw, wood	ferrous flat slot head 1 X 12		1							1
screw, wood	ferrous flat slot head 1-1/4 X 10	1						1		2
screw, wood	ferrous flat slot head 1-1/4 X 12		1		1					2
screw, wood	ferrous flat slot head 1-1/4 X 14		2							2
screw, wood	ferrous flat slot head 1-1/4 to 1-1/2 X 10		1							1
screw, wood	ferrous flat slot head 1-1/4 to 1-1/2 X 14		1							1
screw, wood	ferrous flat slot head 1-1/2 X 8		1							1
screw, wood	ferrous flat slot head 1-1/2 X 10		1							1
screw, wood	ferrous flat slot head 2 X 10		1							1
screw, wood	ferrous flat slot head 2 X 14		1							1
screw, wood	ferrous slot head 1-1/2 to 2 in.					1				1
screw, wood	yellow metal slot head 3/4 X 4				1					1
spike	ferrous boat spike w/diamond hd, 8-1/4 in.		1							1
spike	ferrous, railroad spike, 5-1/2 to 5-3/4 in.		1	1						2
spring	yellow metal 3/8 inch diameter		1							1
spring	ferrous, 1/2 inch diameter		5							5
staple, wire	ferrous u-shaped, 1/2 inch long		1							1
staple, wire	ferrous u-shaped, 5/8 inch long		1		1					2
staple, wire	ferrous u-shaped, 3/4 inch long	2	1				1			4
staple, wire	ferrous u-shaped, 7/8 inch long		6							6

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HARDWARE CLASS		FILL	GOLD	MIXED	POST	STS	STS	UNIT 25D	F202	TOTAL
			RUSH		1900	1983	1985	DIST	&204	
Type	Description									
staple, wire	ferrous u-shaped, 1 inch long		2							2
staple, wire	ferrous u-shaped, 2-1/2 to 3 in. long		1							1
staple, wire	ferrous u-shaped fence, 1-3/8 inch long				1					1
strapping iron	ferrous, L-shape, notched			1		1				2
strapping iron	ferrous riveted		2							2
strapping iron	ferrous w/screw holes		4					1		5
strapping iron	ferrous, thin, 5/8 inch wide		4					1		5
tack, cut	ferrous, flat common head, 1/4 inch		1							1
tack, cut	ferrous, flat common head, 3/8 inch							1		1
tack, cut	ferrous, flat common head, 1/2 inch		29		1		1			31
tack, cut	ferrous, flat common head, 5/8 inch		25		1		1	1		28
tack, cut	ferrous, flat common head, 3/4 inch		3		1		1			5
tack, cut	ferrous, head unknown, 1/2 inch		1							1
tack, cut	yellow metal dome head & 1/2 in fe. shank	1	1							2
tack, wire	ferrous, flat common head, 3/8 in		1							1
tack, wire	ferrous, flat common head, 5/8 in		3							3
tack, wire	ferrous, flat common head, 3/4 in				2					2
tack, unknown	ferrous, shank missing, head unknown				2					2
tack, unknown	yellow metal, shank missing, dome head		1					1		2
thumb tack	ferrous flat common head, red paint 5/16 in				1					1
thumb tack	ferrous shank, yellow mtl flat head, 1/4 inch		1							1
thumb tack	ferrous, head only, 5/16 in diameter		1							1
thumb tack	plastic head, ferrous shaft, 7/8 in				1					1
thumb tack	yellow metal, head only, 5/16 in diameter		1							1
washer	ferrous, 1 in diameter, 3/8 inch hole				1					1
washer	ferrous, flat 1-1/4 inch diameter	1								1
washer	ferrous, flat, 2 inch	1								1
washer	rubber, black, 5/8 in. opening 15/16 diameter				1					1
wire	ferrous multi-strand	1		1						2
wire	ferrous multi-strand box tie <.100 in. diameter		40	1	10	2	1	9		63
wire	ferrous single strand <.100 in. diameter	2	41	5	6			3		57
wire	ferrous single strand >.100 in. diameter	1	3		1			3		8
wire	yellow metal .065 inch diameter	3	4	1						8
										0
TOTAL		15	236	13	43	7	7	26	0	347

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Table 5.4: Summary of bricks and mortar

BRICK AND MORTAR	FILL	GOLD RUSH	MIXED	POST 1900	STS 1983	STS 1985	UNIT 25D DIST	TOTAL	% OF OF TOTAL
	no.	no.	no.	no.	no.	no.	no.	no.	
Brick									
soft red	1771	129	23	289	34	21	531	2775	88.0%
soft red, secondary burning	16	173	23	52	48	8	11	308	9.8%
coarse tan	23							23	0.7%
subtotal bricks	1810	302	46	341	82	29	542	3152	100.0%
Mortar								0	
mortar, plain	281	52	4	31	48	22	163	601	91.6%
mortar, secondary burning	0	34	1	1	15	2	2	55	8.4%
subtotal mortar	281	86	5	32	63	24	165	656	100.0%
TOTAL	2091	388	51	373	145	53	707	3808	
	WT.	WT.	WT.	WT.	WT.	WT.	WT.	WT.	WT.
Brick	(grams)	(grams)	(grams)	(grams)	(grams)	(grams	(grams)	(grams)	(grams)
soft red fgs.	109.2	223.5	25.4	1473.9	126.8	28.1	6973.1	8959.9	83.5%
soft red, secondary burning	21.6	452.5	21.6	62.9	40.2	10.3	1157.1	1766.2	16.5%
coarse tan*								0.0	0.0%
subtotal bricks	130.8	676.0	47.0	1536.8	167.0	38.4	8130.2	10726.1	100.0%
Mortar									
mortar, plain	416.5	74.4	10.5	582.0	204.2	40.1	683.3	2011.0	90.1%
mortar, secondary burning	0.0	162.8	27.4	3.0	24.2	1.0	1.4	219.8	9.9%
subtotal mortar	416.5	237.2	37.9	585.0	228.4	41.1	684.7	2230.8	100.0%
TOTAL	547.3	913.2	84.9	2121.8	395.3	79.5	8814.9	12956.9	

Table 5.5: Structural Materials Inventory

STRUCTURAL MATERIALS CLASS Type	Description	FILL	GOLD RUSH	MIXED	POST 1900	STS 1983	STS 1985	U-25D DIST	F202 & F204	TOTAL STRUCTURAL
brick	soft, red fragments	1771	129	23	289	34	21	531	0	2798
	soft, red, burned fragments	16	173	23	52	48	8	11	0	331
	tan, hard coarse, fgs	23	0	0	0	0	0	0	0	23
building paper	painted, yellow and white	0	0	0	2	0	0	0	0	2
	painted, no color id	9	0	0	0	0	0	0	0	9
	painted, multiple layers/colors	2	0	0	0	0	0	0	0	2
composite wood product	particleboard, cream paint	0	0	0	6	0	0	0	0	6
	beaverboard, painted aqua	0	0	0	0	0	1	0	0	1
	beaverboard, unpainted	1	0	0	0	0	0	0	0	1
linoleum	bl-gr marbled, textured bkgd	0	0	0	0	1	0	0	0	1
	color missing/unid	17	0	0	0	0	0	1	0	18
	color missing, textured bkgd	0	1	0	0	0	2	5	0	8
	green & yellow, textured bkgd	0	0	0	0	1	0	0	0	1
	green/red/black	0	0	0	0	0	1	0	0	1
	pink	0	0	0	0	0	4	0	0	4
	red, textured bkgd	0	4	1	8	0	0	0	0	13
	red, white, mottld gr & or	0	0	0	103	0	0	0	0	103
	tan, textured bdgd	1	6	0	0	0	0	0	0	7
	tan/cream/brown	1	0	0	0	0	0	0	0	1
	tan/green/cream/text. bkgd	16	8	0	0	0	0	2	0	26
	tan/black/red, textured bkgd	14	21	0	0	0	0	9	0	44
	white, textured bkgd	0	0	1	0	0	0	0	0	1
mortar	mortar, plain	281	52	4	31	48	22	163	0	601
	mortar, burned	0	34	1	1	15	2	2	0	55
paint chips	color unid	9	0	0	0	0	0	0	0	9
	bluish green	1	0	0	2	0	0	0	0	3
	dark brown	0	0	0	2	0	1	0	0	3
	green & white	0	0	0	6	0	0	0	0	6
	grey	1	0	0	0	0	0	0	0	1
	white	0	0	0	3	0	0	0	0	3
siding/roofing	asphalt, unid	0	0	0	0	1	0	0	0	1
	asphalt, mineral coated	11	0	0	8	3	0	0	0	22
	black asphalt with pea gravel	0	0	0	4	0	0	0	0	4
	black asphalt with r&w pea gr	0	0	0	3	0	0	0	0	3
	black roofing felt	4	94	0	8	8	2	12	0	128
wallpaper	turq/grn/bl floral	0	0	0	0	1	0	28	0	29
window glazing	dk brown glossy paint	1	0	0	0	0	0	0	0	1
	red paint	3	0	0	10	0	0	0	0	13
	unpainted	4	0	0	1	0	5	0	0	10
wood, shaped	painted dark brown	1	0	0	0	0	0	0	0	1
	painted green & white	0	0	0	1	0	0	0	0	1
	painted pea green	0	3	0	0	0	0	0	0	3
	painted pink	0	0	0	2	0	0	0	0	2
	painted tan	0	0	0	0	0	0	1	0	1
	painted white	1	0	2	1	0	0	0	0	4
	painted yellow	0	0	3	2	1	0	2	0	8
	painted, color not id	4	0	1	0	0	0	0	0	5
	bark, square cut end	0	0	0	0	0	1	0	0	1
	charred	0	0	0	7	0	0	0	0	7
	unpainted	132	121	0	46	7	7	51	3	367
	plywood, 5/16 inch, triple ply	0	0	0	1	0	0	0	0	1
	post	0	0	0	0	0	0	0	2	2
	redwood	0	1	0	0	0	0	0	0	1
										0
TOTAL		2324	647	59	599	168	77	818	5	4697

of the plaster has one smoothly finished face, suggesting probable use on interior walls.

The inventory listing for brick is further subdivided into several categories, fragments of red brick, red brick with secondary burning; and coarse tan brick (Table 5.4). With the exception of two or three items, virtually all of the brick was fragmentary, and the individual pieces were quite small.

Wherever it was possible to determine the length, width, or breadth of the original item, these dimensions were recorded in the lab notes. However, for purposes of this report, interior spalls and fragments (partial items) are lumped into a single category.

There is some variation in the temper and grit inclusions, but generally the recovered red bricks, common or building brick, tend to be rather soft and porous with a finely textured matrix. The tan fire bricks are hard and extremely coarse; the matrix contains large irregular particles of sand, crushed rock, and other unidentified inclusions. The bricks were found only in the fill of unit 25-C. Several bore the imprinted name TCARR, a logo used by Thomas Carr & Son of Newcastle-on-Tyne, England. This company was in business between circa 1827 and 1918 (Gurcke 1987:74). Measurements and further manufacturing details for these bricks have been recorded in the lab notes but will not be included in this diccussion because the unknown provenience of the fill in unit 25-C.

Brick makes up almost one-fourth of the total structural group. Apparently some of the bricks were machine made extruded; the large inclusions and non-uniformity suggest these bricks predate the 1920s. Other bricks were probably soft mud, mold-made, sand struck with mortar (Gurcke 1987). However, because virtually all of the fragments were quite small, lacking any integrity or identifiable characteristics, the majority of the brick fragments from this collection were not measured, and no intensive analyses of temper and manufacturing techniques were done. If additional research is planned for this area, further analytical work on the bricks should be accomplished.

The term "Building Paper" is used for a number of anomalous pieces of heavy paperlike material that had been painted. Paint colors include green, yellow and white; two items have multiple layers of paint. Mineral-coated asphalt siding/roofing and black roofing felt are listed in the Siding/roofing category.

The inventory of structural materials (Table 5.5) includes 14 "types" of linoleum. These types are based on the backing and the color and design of the face. However, it should be recognized that the items with similar backings were further subdivided by color and pattern, and the different "types" may all very well be from widely separated areas of the same randomly patterned floor covering.

Various colored paint chips were found in the excavations. These include colors such as bluish-green, dark brown, green and white, grey, white, and yellow (Table 5.5).

Numerous fragments of deteriorated composite wood products were found in this excavation. Based on their general appearance and composition, these items are classed as particleboard (also known as chipboard), plywood, and beaverboard. Particleboard is a composition building product made of compressed wood particles bonded with resins or binders (NAWC 1973:308). Particleboard is not particularly water resistant, and expands and deteriorates when exposed to moisture. Some of the particle board fragments found in the Peniel excavations retain a coat of cream colored paint.

Particleboard is often confused with hardboard. Hardboard is combined sawmill wood residues and larger pieces of wood, formed under pressure and heat to form hard, thin, inexpensive building material often used today for cupboard backing and smooth wall coverings.

In the early part of the twentieth century, beaverboard was used as a cheap substitute for wallboard (Nuce 1986). It is basically a fiberboard, a prefabricated product of "wood or other plant fibers compressed and bonded into a sheet" (NAWC 1973:170). Although some of the pieces found in these excavations bear traces of aqua paint, the rough, fiberous surface of beaverboard is often poorly suited for painting.

Other shaped or milled wood products include painted and unpainted items, wood which retained some of the tree bark, and charred wood. Painted wood came in a variety of colors, including brown, green and white, pea-green, pink, tan, white, and yellow. The remains of two posts, features 202 and 204, are included in the milled wood category.

Small grey-white strips of window glazing were found in several of the excavation units; most are unpainted, but traces of red paint and dark brown glossy paint were found on a few pieces.

Gold Rush Period Structural Materials: Excluding nails and window glass, brick and mortar accounted for over half (60%) of the Gold Rush period structural materials (Tables 5.1, 5.4, and 5.5). Slightly more than half of the brick found was stained by secondary burning (173 of 302 items, or 57%). Brick from the trash deposits was the plain, soft red variety. Of a total of 86 pieces of mortar found in the trash deposits, about 40% had received secondary burning.

While some of the scorched brick may have resulted from on-site dump burning, other factors should be considered also. Fire was an ever-present danger in early-day Skagway, and some of the burned brick may have come from the ruins of a burned structure.

The source of the brick found in the excavations is unknown, but may well have been Haines, only a few miles southwest by sea. The Daily Alaskan for May 27, 1899 (p. 2) reported that Haines Mission had found a "superior quality of clay . . . and preliminary tests . . . [show]

that an excellent quality of brick can be made from it". The brick yard was opened June 16, and the first scow load of brick arrived in Skagway June 30. By September, the Klondike Trading Company was advertising: "Buy your brick of the Haines Brick Yard. . . . Only $20 per thousand, special rates on large quantities" (Daily Alaskan, 6 September 1899: 3; 1 January 1900:14). Brick made in Seattle was also advertised in the Skagway paper, along with plaster, hair, lime, lath, and cement (Daily Alaskan, 20 April 1900:4).

Several types of building paper and siding or roofing materials were found in the Peniel Mission excavations. However, only one type, black roofing felt, was included in the Gold Rush period deposits. This felt was probably quite similar to the roofing felts and papers, cements included, described in the Montgomery Ward's catalog for 1897 (1969:386).

Five different "patterns" of linoleum were found in the Gold Rush deposits; most of these had a textured backing. Of the 40 total Gold Rush period items, slightly over half (21) are from the same tan, black, and red geometric patterned piece with a textured backing. There were a number of types of floor coverings available to the turn of the century householder. The cheaper varieties included "floor oil cloth", a mixture of minerals, earth, and oil applied to a jute cloth. It is probable that, like the oil cloth we are familiar with today, this floor oil cloth had a textured back due to the inclusion of the jute. Metallic corners or binders were used to keep the oil cloth in place. The Montgomery Ward catalog for 1897 (1969:344) states that "Linoleum is but another name for an oil cloth of superior quality, and is made of ground cork and oil. Patterns are the same as in oil cloth." While the oil cloth was lavishly illustrated, there were no corresponding illustrations for the linoleum in the 1890s catalogs. The Sears Roebuck catalog for the same date (1897:1968:300) sold a variety of floor coverings, including linoleum which was "much heavier, more durable . . . [and] very much softer to walk on" than the oil cloths. The linoleum came in 2 and 4 yard widths. By 1902, the mail order companies were evidently selling more linoleum, for they now included drawings of a number of linoleum patterns that were available, and the ads for linoleum outnumbered those for the floor oil cloths (Sears Roebuck 1902: 897-898).

No window glazing, paint chips, or composite wood products were found in the Gold Rush deposits, but quite a lot of shaped wood (a total of 125 pieces) was recovered. Most of this is unpainted, or the paint has worn away, but several pieces retain traces of pea-green paint. One piece of redwood was found in the trash deposits. Two unpainted wooden posts (features 202 and 204) were found in unit 25-A.

Despite the fact that the Moores built a sawmill, many of the structural materials and supplies had to be imported from outside Alaska because the local timber was small, and not of the proper type for many construction activities. For example, Bernard Moore's diary documents that shingles were imported for his projects. Bridges for the Brackett wagon road were shipped in, and when work began on the railroad, the ties and rails were brought in by steamer (Daily Alaskan, 14 April 1900:1). It was after the turn of the century before a door and sash factory was built in Skagway.

Mixed Deposits, Structural Materials: Modest amounts of structural artifacts (n=59) were found in the mixed deposits of Level IV just above the trash deposits. The majority of these items came from brick (n=46).

Post-1900 Structural Materials: Of the 341 red brick fragments only about 15% were burned secondarily (n=52) (Table 5.4). None of the coarse tan brick was found in Level V strata. Early structures in Skagway utilized a variety of materials for chimneys. Some of the recovered brick may have come from chimneys destroyed when the buildings were moved during the early part of the century. It appears that brick chimneys were added to the Peniel sometime after its initial construction but before 1910.

Siding or roofing materials include black roofing felt, and an assortment of mineral-coated asphalts, some with embedded pea gravels.

Almost half of the linoleum fragments recovered during the Peniel Mission excavations come from the post-1900 levels, and the majority of these (103 pieces) are a single pattern, a red, white, grey and orange mottled geometric design. Much of the red/black/orange/grey/white geometrically patterned linoleum was found in the test trench, close to the Peniel Mission, suggesting it may have been discarded when the structure was remodeled in the 1930s. We do not know when this linoleum was manufactured.

Thirteen paint chips were found in the more recent levels. These are blue-green, dark brown, green and white, and white. Six pieces of particle board showing traces of cream colored paint were recovered, as was a single piece of 5/16 inch triple-ply plywood, along with 61 pieces of shaped wood. For the most part, the shaped wood was unpainted. A few items have splotches of green and white, pink, tan, or white paint remaining. Several pieces of shaped wood with traces of yellow paint were recovered. Other recovered structural materials include 10 pieces of window glazing, most of which was painted red.

Unit 25-D, Disturbed Strata, Structural Materials: Large quantities of brick were found in these strata. Of the 542 red brick fragments, only 11 are secondarily burned. Other building materials include 165 pieces of mortar, two of which are burned (Table 5.4). A large rectangular piece of masonry-like material was found in this stratum. Although incomplete, it appears to be quite similar in shape and size to a brick, but of a very crumbly concrete/sand composition. This item may be a form of concrete block. Much of the mortar found in this unit was similar in composition to this item. Although the pieces of brick and mortar from the upper strata of this unit are far outnumbered by items found in the fill, the unit 25-D items, especially the brick, outweigh all others considerably (Table 5.4). It is possible that fragments of brick left over from other projects were tossed into the trench in the unit 25-D area before it was backfilled.

Shovel Tests, Structural Materials: There were 111 fragments of brick found in the shovel tests. Nearly half of these were blackened or showed other evidence of burning. Quite a bit of mortar was found here also (Table 5.4). Isolated occurrences of linoleum, paint chips, composite wood products, siding/roofing, tile, wallpaper, window glazing, and shaped wood contributed to the total of 245 structural materials items (Table 5.5).

WINDOW GLASS CLASS

While window glass (flat glass) is included within the Structural Group, it makes up a separate class from other building materials because the processes involved in its deposition in an archeological context differ from the generation of other types of structural artifacts. Tables 5.1 and 5.6 itemize and summarize the window glass and show that it makes up a fairly high proportion of the total structural materials. Although the glass color, ranging from clear to aqua, was recorded during the cataloguing process, it is not listed in the inventory. Some of the sherds retain traces of white, black, aqua, cream, orange, red, and pink paint; these items are included in the following discussion. As can be seen in Table 5.6, measurements of the recovered glass ranges from a little less than 4/64 inch to thick pieces whose breadth is greater than 8/64 inch. Note that the modal size of the flat glass sherds is 5/64 inch. Sherds from the imported fill of unknown origin in unit 25-C were counted, but no measurements were made.

Gold Rush Window Glass: Five hundred forty-eight pieces of window glass were found in the Gold Rush deposits (Level V). These sherds range from less than 4/64 inch thick to over 8/64 inch thick, with 61% of this flat glass falling into the .0705 to .0865 inch thick range (5/64 inch). Nine of these sherds have been splashed with orange paint, 9 retain traces of black paint, and 1 sherd appears to have been painted red and white in some sort of pattern. Twenty-four sherds have cream colored paint, and 14 are pink. Thirteen sherds either have badly discolored white paint or were originally painted black.

Mixed Deposits Window Glass: Modest amounts of structural artifacts (n=392) were found in the mixed deposits of Level IV just above the trash deposits. Eighty-four pieces of window glass with a modal thickness of 6/64-inch were recovered from these transitional deposits.

Post-1900 Window Glass: Window glass found in the post-1900 excavation levels II and III totals 448 sherds (Table 5.6). Two-thirds of these sherds come from just three locations, strata B and C of excavation unit 25-D (Level III) and stratum B of the Operation 21 test trench C (Level II). Thickness distribution of the post-1900 sherds clusters at about 5/64 inch. A few of these sherds have aqua, cream colored, or white paint residues.

Unit 25-D, Disturbed Strata Window Glass: A great deal of window glass was found in the disturbed strata of excavation unit 25-D and feature 213. The largest percentage (38%) of this glass was about 6/64 inch thick (n=325), but 263 sherds of the 859 total (about 31%) measured only slightly thinner, about 5/64 inch. Black (or discolored), white, and orange paint specks were found on a few of these glass sherds. Several of the larger pieces of glass were found in feature 213. These pieces were found laying on the stream bank adjacent to the disturbed areas of trash, and may have fallen from Building I.

Shovel Tests Window Glass: A modest number (114 pieces) of window glass sherds were found in the 1983 and 1985 shovel tests. Almost half of this window glass was approximately 5/64 inch thick. White, black, and orange paint were found on a few items.

HARDWARE CLASS

This class includes construction hardware (bolts, screws, tacks, etc.), builder's hardware (door and window hardware), and miscellaneous hardware such as fasteners, fittings, and strapping metal. Because there were so many nails in the collection, they were placed in a separate class

Table 5.6: Window glass inventory

WINDOW GLASS CLASS											TOTAL	% OF
Type and thickness	Range of thickness	Class	FILL	GOLD	MIXED	POST	STS	STS	U25-D	F202 &	WINDOW	EACH
		Mark		RUSH		1900	1983	1985	DIST.	F204	GLASS	TYPE
less than 4/64 inch	<0.0545 inch	0.047	1	4	0	0	0	1	0	0	6	0.3%
4/64 inch	0.0545 to 0.0705 inch	0.062	16	85	8	15	13	14	164	0	315	13.6%
5/64 inch (*modal size)	0.0705 to 0.0865 inch	0.078	33	334	25	245	32	24	263	1	957	41.4%
6/64 inch	0.0865 to 0.1025 inch	0.094	24	103	45	90	10	11	325	0	608	26.3%
7/64 inch	0.1025 to 0.1185 inch	0.109	30	16	3	33	3	0	82	1	168	7.3%
8/64 inch	0.1185 to 0.1345 inch	0.125	36	2	0	64	3	1	17	0	123	5.3%
greater than 8/64 inch	>0.1345 inch	0.141	3	4	3	1	2	0	8	0	21	0.9%
textured			1	0	0	0	0	0	0	0	1	0.0%
not measured			113	0	0	0	0	0	0	0	113	4.9%
											0	0.0%
TOTAL			257	548	84	448	63	51	859	2	2312	100.0%

(Table 5.2). Rather than lumping all the individual items, such as wood screws, within one broad category, as much detail as possible was provided for each item in the inventory. As an example, screws are itemized by their material, function (wood, machine, etc.), length, diameter (number), and head type (flat slot head, etc.). Although somewhat lengthy, these inventory listings illustrate the variation within the collection and concentrate artifact data in one place, eliminating the need for a long discussion. Hopefully, these inventories can also help provide a feel for the many specific functions for which these individual items were intended.

Numerous pieces of wire were found in the excavations (Tables 5.2 and 5.3). Quite a few of these may have come from box ties. That is, the scraps of uniformly twisted wire composed of two single strands measuring less than .100 inch diameter each, are probably the end portions of wooden packing crate fastenings.

Various fasteners, ranging from tacks to lag bolts, are included in the hardware lists. Screws, bolts, nuts, and washers found in the excavations range in type and size from a 1/2-inch ferrous pan slotted-head sheet metal screw to a 6-1/2 inch long lag bolt. These items were compared with modern hardware for both nomenclature and sizing, and the following definitions are used: carriage bolts have coarse threads, and a rounded head with an enlarged squared neck just below the head. Machine bolts may have either coarse or fine threading, and a flattened, square head. Both carriage bolts and machine bolts are threated only on the lower portion of the shank. Stove bolts are coarsely threaded; they have a round slotted head. Lag screws have a coarse threading, squared head, and are threaded on the lower portion of the tapered shank.

Screws, defined as threaded, solid tapered cylinders, usually with a head, are used to hold objects together. Because of their design, they have more holding power than nails. They allow rapid, efficient disassembly of an item or structural element. Although there are a wide variety of types, the most common screws have slotted or Phillips heads; the heads may be round, oval, pan shaped, or flat. The base may be gimlet, blunted, or self-tapping. Wood screws are threaded only on the bottom portion of the shaft; the tapered upper portion is smooth. The entire shaft of machine or sheet metal screws is threaded. Screws are sized by both length and diameter. Generally the screw should be about 1/8th inch shorter than the total thickness of the items to be joined (Popular Science 1974:545). The diameter of the screw used is directly related to the type of fabric being joined (density, possibility of splitting, etc.) and the workmanship desired (e.g. fine cabinetry as opposed to temporary rough plank shelving).

Screws and bolts are generally ferrous, but may be galvanized or from a rust-resistant material such as aluminum or copper for areas where corrosion is likely to create a stain. Although all of these items have been included in the structural hardware category, it is obvious that many of them may have been used for other purposes. For example, the lag and carriage bolts may have been used on heavy machinery or equipment of some sort.

Gold Rush Hardware: Excluding nails, over half (68%) of the hardware found in the Peniel Mission excavations came from the Level V Gold Rush deposits (Tables 5.2 and 5.3).

Hardware found in the dump area includes several spikes. One is a ferrous railroad spike, 5-3/4 inches long; another is a boat spike--a large ferrous spike with a square shaft, a sloping "diamond" head with five facets, and a chisel-like point (Figure 5.1). The boat spike has been clinched or bent midway at a 90 degree angle.

Builder's hardware found in the Gold Rush deposits includes several hinges. A bent, corroded, T-hinge with 5 visible screw holes was found in the Level V of excavation unit 25-A (Figure 5.2a). T-hinges, which are "a sort of a combination butt-and-strap hinge," are designed to fasten a moveable door or lid to a solid frame, and have one long tapered

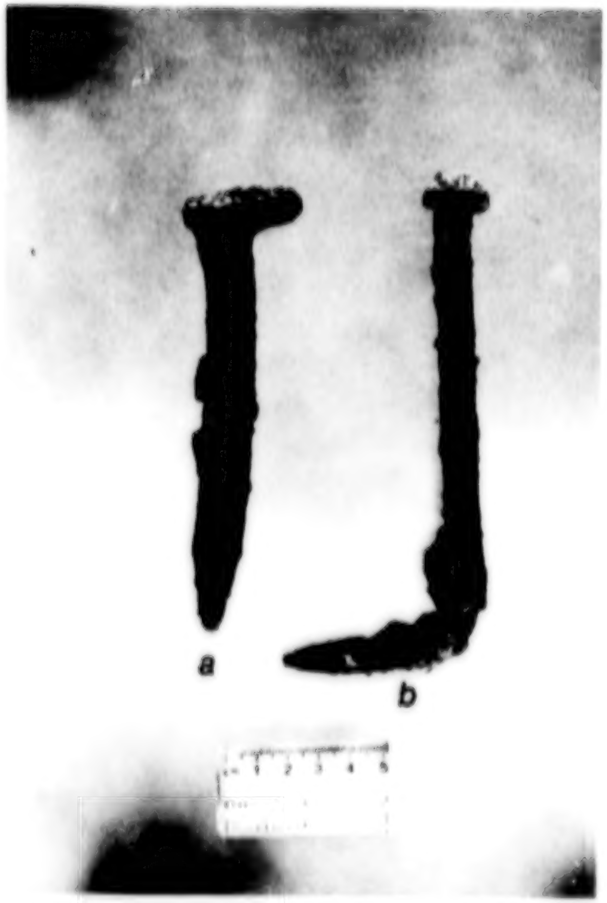


Figure 5.1: Railroad and boat spikes

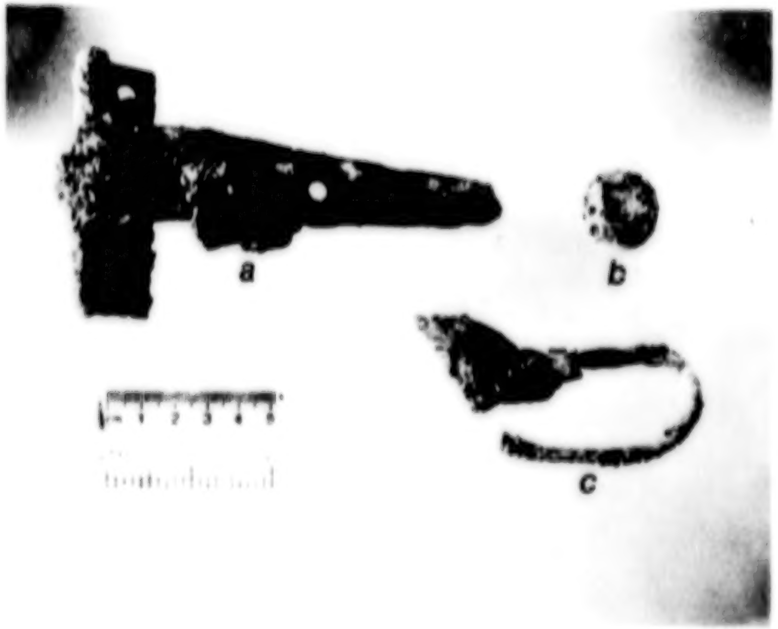


Figure 5.2: Miscellaneous hardware from Gold Rush deposits a) T-hinge, b) Knob, c) Pull

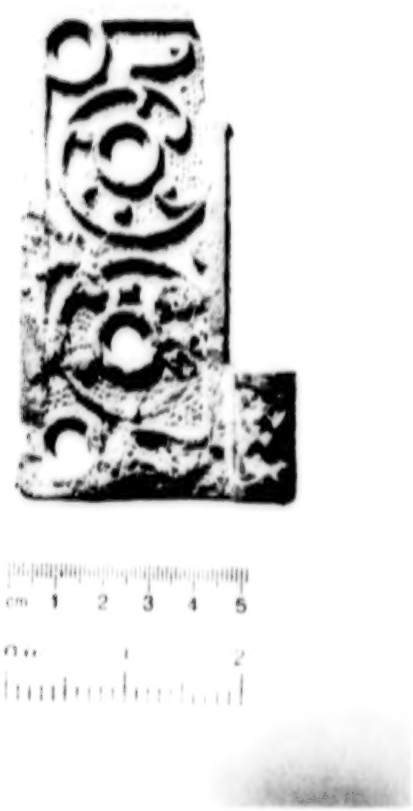
leaf and one short, rectangular one (Popular Science 1974:752). A second ferrous metal hinge from unit 25-B was too badly deteriorated to determine the exact type, but appears to be a standard fast-pin butt hinge. That is, the rounded portions of the hinge which intermesh with each other are connected by a non-removable pin. The term "butt" is often used to refer to hinges that are butted or mortised into both the door and the frame, but these may also be used as a surface hinge (Brownell 1956:23,30). If opened out flat, this hinge would measure approximately 3 inches high by about 2-1/2 inches across.

Although all of the tools and almost all of the supplies used in construction activities had to be shipped into Skagway, it appears that supplies were generally available. For example, the Daily Alaskan for March 17, 1899 (p. 2) advertised: "Builder's Hardware without end at Allen's."

A rectangular, ferrous hinge leaf was found in stratum E of the Operation 21 test trench C (Figure 5.3). This partial hinge is of the loose pin variety, and has a cast geometric design on the leaf. An identical item is described in the 1897 Sears Roebuck catalog as "No. 14148. Loose Pin Cast Iron Butts, plain finish" (1968:91). The hinge leaf found in the Peniel Mission excavations is the left hand portion of the set; it is missing the upper right swivel portion of the hinge and the hinge tip or cap.

A porcelain door knob was found in stratum F of the Operation 21 test trench B (Figure 5.4). The rounded, white porcelain knob is 2-1/4 inches in diameter, with a hollow ferrous shaft.

The majority of the screws found in these excavations come from the pre-1900 strata. Out of a total of 33 screws and screw fragments, 21 are from the Gold Rush deposits. One of these is an eye screw, two fragmentary items are too corroded to identify, three are machine screws, and 15 are wood screws.



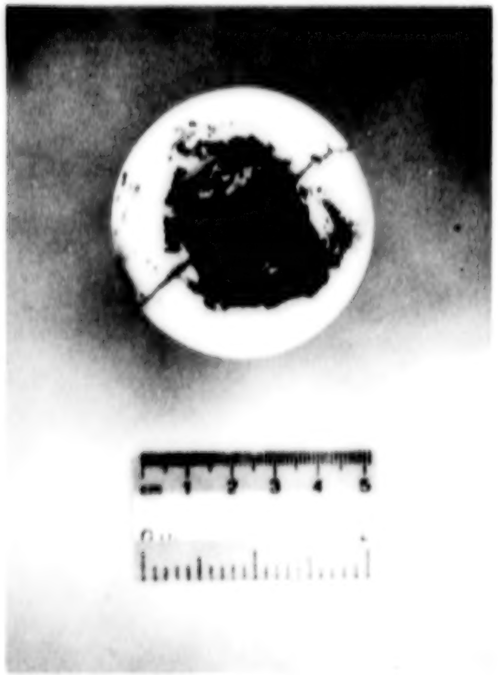


Figure 5.3: Decorative loose bolt hinge leaf

Figure 5.4: Porcelain door knob from stratum F of the Operation 21 Test Trench B

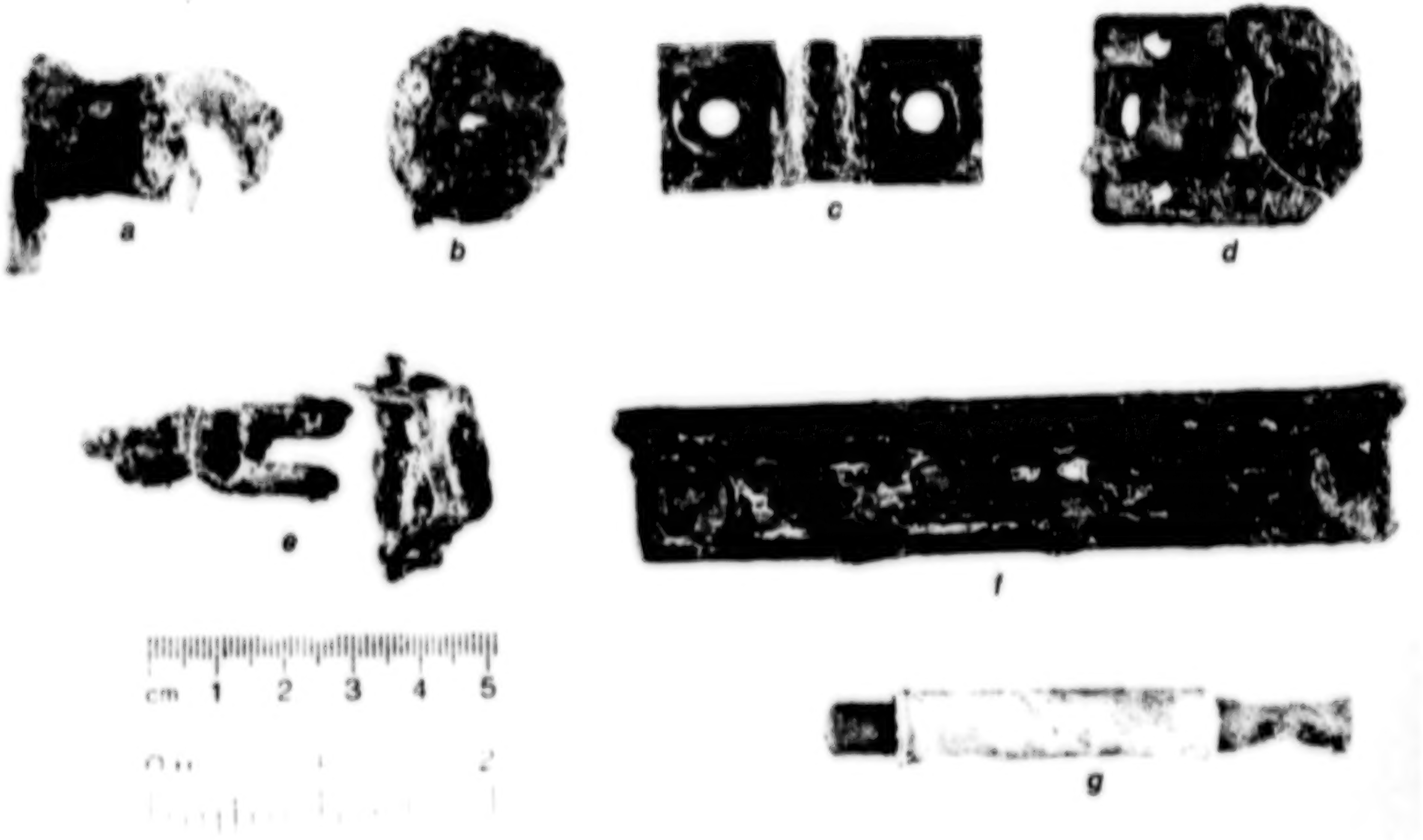


Figure 5.5: Assorted hardware a) Ferrous roller blind hardware, b) Ferrous roller blind part, c) Ferrous latch bolt end, d) Ferrous latch bolt end, e) Ferrous latch part, f) Ferrous latch part, g) Ferrous Japanned door latch rim striker, h) White metal and ferrous sash pin

Of the 17 staples from the excavation, 12 are from the older deposits. These ferrous staples range from small 1/2 inch items to a partial staple whose estimated length is between 2-1/2 and 3 inches. Sixty-eight of the total of 84 tacks recovered come from the Gold Rush deposits; all but two of these are ferrous. While a number of items are partial, the majority are cut tacks of the common flat head variety, ranging from 1/2 inch to 3/4 inch in length. Thumbtacks are included in the hardware group also; three of these were found in the trash deposits.

Small fragments of several ferrous and yellow metal springs, ranging from 3/8 to 1/2 inch in coil diameter, were found in the Gold Rush excavations. Some of the items may have been used for different purposes, but the general size and configuration of the majority is similar to springs used on screen doors. One end of the yellow metal spring is bent inward as if to attach in a groove, suggesting it may have been a component of some larger item.

Other miscellaneous hardware includes pieces of a 1/4-inch diameter ferrous cable, oval ferrous chain links, a 1-1/2 inch screw hook, a large strap hook or hanger, and ferrous rings.

Three stair or carpet buttons were found in the Gold Rush deposits. These artifacts, resembling large, ornamental thumbtacks, were screwed or driven through the carpet to fasten it to the raise of the stair at the bottom (Montgomery Ward and Company 1969:343). Similar items, consisting of a tack or nail through a metal collar or washer, were also used to attach fabric to a wall surface.

Assorted sizes and types of strapping iron were recovered.[3] One piece from the Gold Rush Deposits is about 5-3/4 inches long and 1-1/4 inches wide; both ends are rounded and one side is slightly notched 1 inch from the end. It has at least one screw hole and what appears to be a broken away rivet in the notched end. Another slightly thinner piece, broken away at both ends, has an irregular, slightly funnel-shaped hole in one end, suggesting a nail had been driven through the thin metal. Similar strapping or ferrous bands were used on barrels or nail kegs to hold the wooden staves together.

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[3] The Construction Dictionary (NAWC 1973: 423) defines "strap" as an iron plate for connecting two or more timbers, to which it is screwed by bolts. It generally passes around one of the timbers.

Very little patterning was observed in the rest of the Gold Rush hardware collection. Generally speaking, only one or two items of each type were found in these deposits, but the totals were bolstered by relatively large numbers of cut tacks and wire, both box ties and fine single-strand pieces.

The source of these hardware items cannot be determined. However, historic records give examples of the sorts of materials utilized during the Skagway's boom years when a number of construction projects were underway. For example, War Department records document that Captain Hovey requisitioned carpentry tools and hardware items after the Dyea fire. Included in Hovey's list were Japanned chest handles, carpenter's pencils, light T-hinges and hasp (butt) hinges, assorted types and sizes of nails, and screw hooks. Five gross flat head wood screws varying in measurement from 1/4 to 1-1/4 inches were requestioned for general repairs. Other acquisitions included 6 inch stove pipe collars for use in barracks and quarters, 50 pounds of paper, and parts for repairs to the Majestic range No. 58 (Long 1900).

Hardware was also needed for a variety of other projects as well as building construction. For example, a series of robberies in Skagway prompted a run on Yale locks, sash fasteners, and small safes (Daily Alaskan, 20 April 1900:2). Klondikers making their way over the trails to the Yukon had to carry with them the basic necessities for building boats, sleds, packs, etc. to transport their goods the long distance to the gold fields. Local hardware suppliers advertised oakum, pitch, nails and caulking tools for use in building a scow to go downriver (Daily Alaskan, 7 April 1900:4).

Mixed Deposits (Level IV) Hardware: A door latch plate or stop was found in these deposits (Figure 5.5d), along with a hinge fragment, a railroad spike, strapping iron, and 8 pieces of wire. The heavily corroded ferrous items in Figure 5.5e appear to be parts of a cabinet latch or cupboard turn (Sears Roebuck 1970b:979).

Post-1900 Deposits (Levels II and III): Many fewer hardware items were found in the post-1900 levels, but proportionately, the distribution of artifact types within this class was similar to the Gold Rush collection. There were, however, significantly fewer tacks, and other items such as hooks, springs, and carpet buttons were missing entirely from the Post-1900 listing.

Construction hardware from the upper levels included ferrous washers, two carriage bolts, six screws, nuts, and a ferrous slotted bracket or brace.

Portions of several cabinet door latches, door locks, and other builder's hardware were found in the upper strata. Figure 5.5 illustrates some of these items. Item f in this photograph is a black japanned ferrous metal rim lock striker from a upright rim door latch/lock set. The latch portion of the lock was bolted to the door and the striker was affixed to the outer face of the door frame, not inset as is the case with most present-day door locks. These locks were popular for a long period of time. Herskovitz (1978:60) illustrates several examples found at Fort Bowie (circa 1860-1880); very similar sets are illustrated in the Sears Roebuck catalog for 1927 (1970b:979). Items c and d in the same figure are the latch plates for a sliding barrel or bolt lock.

Only two ferrous U-shaped wire staples were found in the Post-1900 excavations, along with a few tacks and two washers. Seventeen pieces of wire of assorted sizes and types were found here also.

Excavation Unit 25-D Hardware: Although there were very few hardware items in this stratum, the distribution of hardware in the disturbed strata of Unit 25-D is similar to that in the Gold Rush collections (Tables 5.2 and 5.3).

A window sash spring bolt (also known as a sash center or sash pin) was found in stratum D (Figure 5.5g). This sash pin is a total of 3 inches long; the 1/4-inch diameter ferrous pin is encased in 1-3/4-inch long sleeve. The pin is a silvery colored ferrous metal, japanned or plated to give it the appearance of white metal. These spring-loaded sash pins were designed to be set into the moveable sash of a double-hung window; when the window was opened the spring forced the pin into a hole in the frame to keep the window from sliding closed.

Miscellaneous hardware includes a drive-in ferrous metal hook, a screw-in eyelet hook, and pieces of wire. Found also in stratum D was a ferrous brace or strap with two large screw holes, one in each end. The small yellow metal wood screw found in the upper levels of unit 25-D was probably used for some sort of fine construction.

Shovel Tests, Hardware: A corroded V-strap hinge with four screw holes in each side was found in one of the shovel tests (Figure 5.7). Miscellaneous hardware included a ferrous rod 14-5/8-inches long by about 5/8-inch in diameter (Figure 5.6a). One end was slightly rounded and the other flattened unevenly as if it had been pounded with a sledge hammer. It may have been used as a tent stake or brace of some sort. Only two partial screws were found in the shovel tests.

A ferrous, L-shaped, notched strap was found in one of the tests, as were ferrous wire box ties or twists. A hook found in the 1983 shovel tests is illustrated in Figure 5.8. This flat, ferrous strip, 5/8 inch wide and 5 inches long, has been bent into a modified "J" or hook shape. In the upper end, a rivet or nail extends inwards towards the hook portion. This suggests that this item was used to support a round object like a pipe (it is too small to hold a log or gutter).

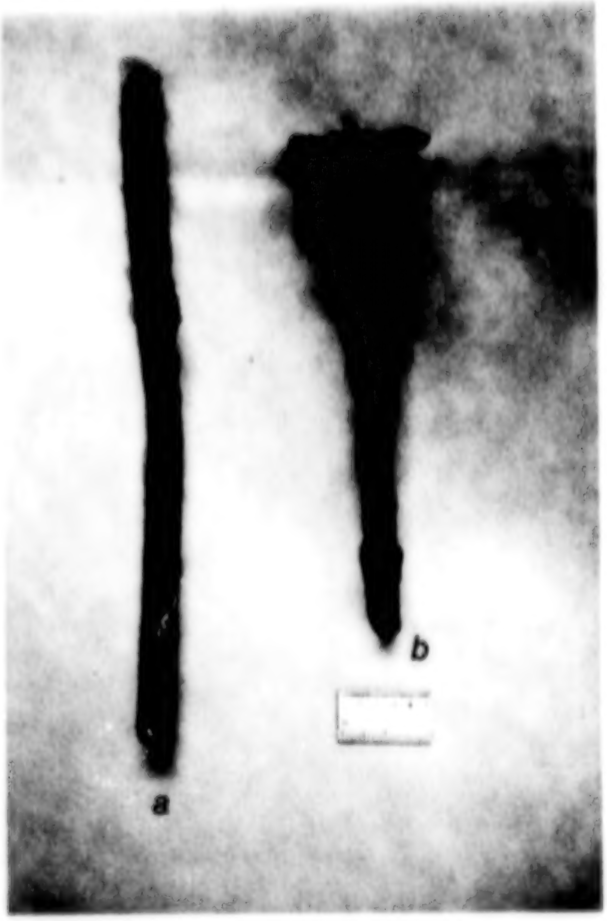

Figure 5.6: Miscellaneous hardware a) Ferrous rod b) Valve head and stem

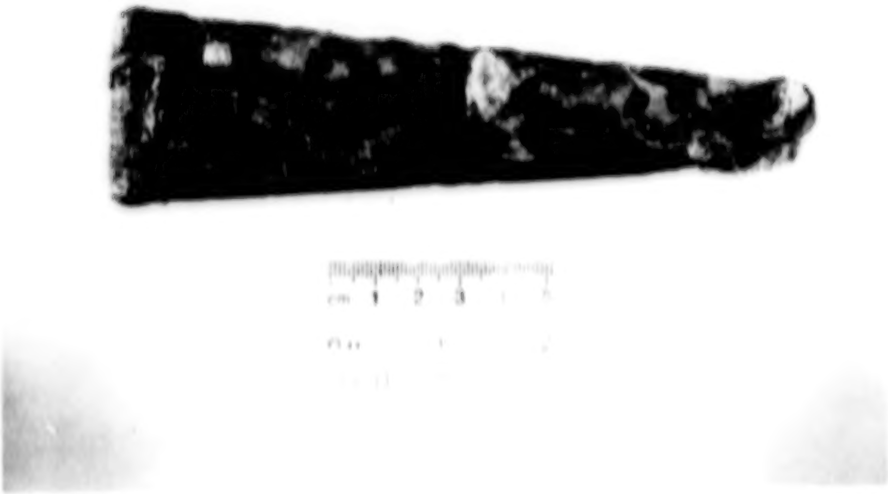

Figure 5.7: Strap hinge from shovel tests

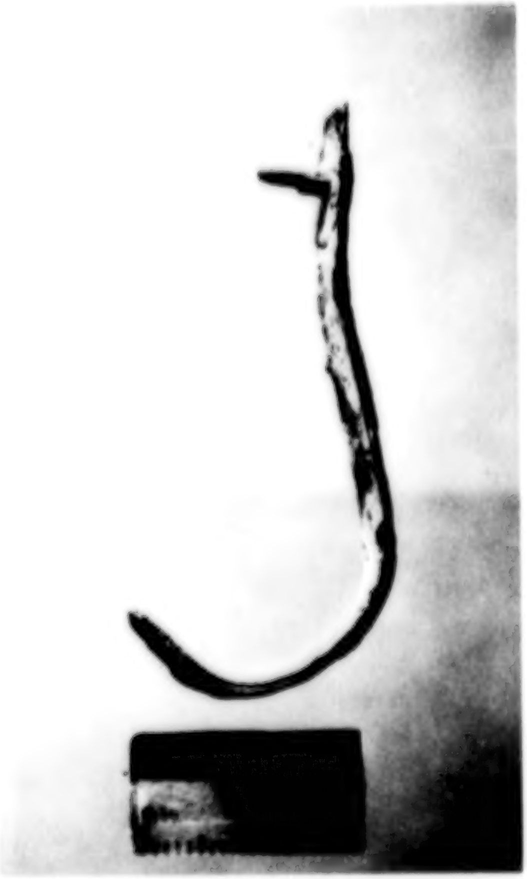

Figure 5.8: Support hook

What appears to be a valve head and valve stem from an internal combustion engine, or possibly, a steam engine, was found in the shovel tests (Figure 5.6b). This artifact is about 10-12 inches long with a 1/2-inch by 3-inch diameter disc resembling a very large washer at one end. A small opening on one edge of the disc was clogged with corrosion.

NAILS CLASS

Introduction

The 5294 nails found in these excavations far outnumber any other single category of structural artifacts, comprising almost 38% of the total Structural Group. Because there are such large quantities and numerous types, and because their method of deposition may be different from other hardware items, the nails are listed in a separate inventory (Table 5.7). In this table, nails have been classified by their material, manufacturing technology (wrought, cut, or wire), head design, and--where known--their function. Less common items were identified by a variety of means, including specialized materials, heads, shanks, points, and surface finishes. The pennyweight of complete nails was recorded, and an estimated probable range was used where enough of the nail remained to make a competent guess as to the pennyweight. Spikes were measured, and their length reported in inches. Sources used in the identification and classification of the nails include Nelson (1968), Georgia Pacific (1986), Fontana and Greenleaf (1962), Better Homes and Gardens (1966), Popular Science (1974), and National Association of Architectural Metal Manufacturers (1952).

Small nails, 2d to 6d, are normally used for finish carpentry work. Four-penny to 8d casing and finishing nails are typically used for paneling and lathing. Roofing activities (wood shingles) generally employ 3d to 4d roofing nails, and 6d to 8d galvanized common roofing nails are used for soffit work. Short roofing nails (from 7/8 inch to 1-1/2 inch)

Table 5.7: Nail inventory

NAILS CLASS											
Type	Description	Pennyweight	FILL	GOLD RUSH	MIXED	POST 1900	STS 1983	STS 1985	F202 & F204	U25-D DIST.	TOTAL NAILS
wrought		9d					1				1
											0
cut	brad	3d			1						1
	common	2d	1								1
		3d		1							1
		4d		1		1				1	3
		5d		1							1
		6d	1	7		2				1	11
		6-8d		2							2
		8d		4						1	5
		10d		1							1
		40d		1							1
		unknown		4	1					2	7
	finishing	6d			1						1
		8d		5							5
		unknown		1							1
	flooring	8d		1							1
	roofing	1d	1								1
		2d		2						2	4
	unknown	4d		1	1					1	3
		4-6d		1							1
		8d								1	1
		10-20d				1					1
		unknown	1	15	1	2				1	20
wire	barge nail	6d		1						1	2
	brad	2d				1					1
		2-4d								1	1
		3d	1			1					2
		4d		3		3	1				7
		4-6d				1					1
		6d		7	1	4				1	13
		8d		11	3			1			15
		unknown		4						1	5
	casing	3-6d				1	1				2
		5d					1				1
		6d					1				1
	common	1d	1	2		2				1	6
		2d	16	47	1	7		2		9	82
		2-4d	1	20	3	2				16	42
		3d	29	74	5	20	2	8		28	166
		4d	17	140	1	15	1	9		41	224

Table 5.7: Nail Inventory (continued)

NAILS CLASS											
Type	Description	Pennyweight	FILL	GOLD	MIXED	POST	STS	STS	F202 &	U25-D	TOTAL
				RUSH		1900	1983	1985	F204	DIST.	NAILS
		4-6d	5	25	1	1	1			7	40
		5d		160	6	6		1		29	202
		5d aluminum		1		1					2
		6d	11	337	39	54	15	9	1	84	550
		6-8d	1	26	4	5		1		26	63
		7d	7	101	2	5	4	3		36	158
		8d	69	469	27	79	12	14	2	140	812
		8-10d		14	1	4	1			22	42
		9d	6	29	2	2				3	42
		10d	2	89	8	12	4	3	1	9	128
		10-20d	5	48	3	3		1		13	73
		12d	2	20		6		3		10	41
		15d		2	1	2					5
		16d	7	2		1	2			2	14
		19d								1	1
		20d	5	77	3	15	2			9	111
		20-40d		7	1					3	11
		25d		3			1			1	5
		30d		4		4	1			2	11
		35d		1						1	2
		40d	1	2						1	4
		40-60d	2	1	1					2	6
		50d	1	2		1					4
		unknown	6	174	29	21	5	2	2	8	247
	common spik	6 inch		4							4
		6-1/2 inch				1					1
		7 inch		2							2
		8 inch		3							3
		10+ inch								1	1
	concrete	2-1/2 in.		2	1	1					4
	double heade	8d						1			1
	fetter ring	5d	1								1
	fine finishin	2d	2							2	4
		3d	3	2							5
		4d		6			1			4	11
		5d		9						1	10
		6d	4	12		3				3	22
		7d	1	2						1	4
		8d	2	10			1			5	18
		9d	2	2							4
		10d	1			1	1				3
		12d								1	1
		14d								1	1
		unknown		5						1	6
	roofing	1d		1							1

Table 5.7: Nail Inventory (continued)

NAILS CLASS Type	Description	Pennyweight	FILL	GOLD RUSH	MIXED	POST 1900	STS. 1983	STS 1985	F202 & F204	U25-D DIST.	TOTAL NAILS
		2d	3	4		4		1			12
		3d	1	3		2		1			7
		4d				1					1
		5d		1							1
		8d		7							7
		unknown	1	1			1				3
	unknown	1d		5						1	6
		2d		3							3
		2-4d		1		2				2	5
		3d		4							4
		4d	1	6	1		1				9
		4-6d		13	1	1		1		18	34
		5d		8	1					2	11
		6d		26	2	2				3	33
		6-8d	1	18	2	1	1			4	27
		7d		5	1					7	13
		8d	1	17	1	3	1			7	30
		8-10d	2	13	4	7	4			16	46
		9d					1				1
		10d	1	13	3						17
		10-20d		96		8	1		3	19	127
		12d		4		1					5
		20d		1							1
		20-40d	1	79	1	1				6	88
		40d		1							1
		50d		1						26	27
		60d		1							1
		unknown	93	878	73	94	44	73	3	174	1432
Unspecified	unknown	unknown		5		5	2		4		16
											0
TOTAL	NAILS		320	3225	238	423	115	134	16	823	5294

Table 5.8: Summary of headed nails

NAIL TYPE										
		GOLD	RUSH				POST-	1900		TOTAL
	2-6d	6-10d	above 10d	other		2-6d	6-10d	above 10d	other	ALL TYPES
Cut nails										0
common flat head	3	14	1			1	2			21
finishing		5								5
flooring		1								1
roofing	2									2
										0
Wire nails										0
finishing	17	26					4			47
barge		1								1
brad		3				6				9
casing		18					4			22
common flat head	469	1065	169			54	161	32		1950
concrete				2					1	3
roofing	9	7				7				23
spike				9					1	10
										0
TOTAL	500	1140	170	11	0	68	171	32	2	2094

are used for application of asphalt roofing and felt. Nails in the next larger group (6d-10d) are utilized for a variety of purposes. In new construction, the generally preferred nail is the 8d common nail. This nail is typically used in wall framing, sheathing, subflooring, ridge beams and roof sheathing (Georgia Pacific 1986:H-2, H-3). Large nails measuring over 10d (especially 16d) are primarily used in the same areas as the 8d nail, that is in framing, sheathing and subflooring. With the excepion of the boat and railroad spikes, spikes are included in the nail inventory. These very heavy, long nails are generally used in heavy construction activities such as bridges, docks, tanks, etc.

Common wire nails are generally used for fairly rough, heavy work, while the finer finishing nails are reserved for areas where a common nail might split the wood, or where the flat head would be obtrusive. That is, finishing nails have a narrow, indented head can easily be "set" below the wood surface. Brads have a rounded head that may appear to be decorative. Casing nails are most often used in finishing interior woodwork.

Because of the large numbers of nails, and their generally poor condition, the exact number of bent items was not recorded. However, visual examination of nails from several units suggests that more than half of the items recovered were bent. Some of these nails may have been reused, but the majority were probably discards or were contained in structural elements that were burned for fuel or that were dumped. Nails in the unidentifiable categories are so obscured by corrosion that only their material (ferrous) and general manufacturing technology (wire nail) can be determined.

Ninety-nine percent of the nails are wire; there are only 73 cut nails in the collection (Table 5.7). Only a single wrought nail, 9d in size, was found at this site. According to Fontana and Greenleaf (1962:54-55), machine-made wire nails were available after the middle of the nineteenth century, with standardized pennyweights by the 1880s. The wire nail industry grew slowly at first, and it was 1890 before the wire nails began to outnumber cut nails. Within 5 years, however, production had doubled, and by 1895 "the wire nail industry all but laid the cut nail industry to rest" (ibid., 48). Cut nails continue to be made up to the present time, but these nails are produced for special jobs where their excellent holding power and overall durability are important (Trement Nail Company 1969:n.p.). Discounting the "probable" or unknown types of nails which are too badly corroded to identify, there are more common 8d flat-head wire nails in the collection than any other type.

Like the other hardware found in the Peniel Mission excavations, the nails were obviously chosen originally for a number of specific tasks such as construction, roofing, concrete work, or flooring (Table 5.7).

Table 5.8 summarizes the headed nails found in the Gold Rush and Post-1900 collections. The nails are sub-divided into four different size groups, 2d up to 6d, 6d up to 10d, and over 10d, and are separated functionally where possible.

Gold Rush Nails: Just a little less than two-thirds of the nails found in the Peniel Mission excavations came from the Gold Rush deposits (Tables 5.7 and 5.8). The largest proportion of these are wire nails of unknown types and pennyweight. The majority (45%, n=33) of the total cut nails recorded came from the Gold Rush deposits, and include common, finishing, flooring, and roofing nails. All of the cut nails in this collection appear to be the machine-cut variety. It is likely that these cut nails were the annealed variety, since a number of items were bent but did not exhibit rupturing (Fontana and Greenleaf 1962:55).

As might be expected, common flat-head wire nails ranging in size from 6d to 10d, a general purpose nail size, make up the largest grouping of identifiable items, with much smaller amounts of individual items spread fairly equitably through the other pennyweight and type categories (Tables 5.7 and 5.8). There were more 8d common flat head nails than any other type. Several specialized nails were found in the Gold Rush collections. These include a barge nail and two concrete nails.

Mixed Deposits Nails: The assortment of nails (n=238) found in the mixed deposits is very similar to the Gold Rush deposits, although the largest single group of identifiable nails are included in the 6d group. Well over half of the total items are too badly deteriorated to determine their original pennyweight or nail type.

Post-1900 Nails: Only about 1/8 as many nails were found in the post-1900 strata (423 as compared to 3225). Generally speaking, the assortment was similar to the earlier collections, although there were fewer cut nails and small pennyweight items.

Excavation Unit 25-D.D Nails: A total of 823 nails were found in these disturbed strata. Seventeen percent were 8d common flat head nails; distribution of the other types is similar to the Gold Rush collections (Tables 5.7 and 5.8).

Shovel Tests Nails: A total of 249 nails came from the various shovel tests. The majority of these are wire nails ranging in size from 4d to 8d.

UTILITIES CLASS

This class includes various electrical supplies such as insulated wire and porcelain insulator fragments, heating supplies (a damper and stove pipe), kerosene lighting equipment parts (lamp glass and lamp fittings), and electrical lighting artifacts (fragments of various types of light bulbs). Pipes and other plumbing fittings are also included in the "Utilities" class along with asphalt road surfacing (Table 5.9). The heavy earthenware tile (pipe) fragments found in the Peniel Mission excavations are of several types, including a thick, coarse tan tile, and hard and soft orange redware. These were probably used for sewer or drainage piping. Unburned coal, cinders/clinkers, and partially combusted coal found in the 1983 excavations and shovel tests were kept and recorded, as were similar items in the upper levels of the 1985 tests.

When it became apparent, however, that vast quantities of these materials were present in the trash deposits, only representative samples were saved. These materials are not included in the final Utilities Class inventory.

Gold Rush Utilities: The artifacts included in this class are itemized in Table 5.9 and summarized in Table 5.1. Only a few plumbing related items were found in the trash deposits. One of these is a 1-1/2-inch long crimped yellow metal tube with interior threading on the wide end. This item appears to be some sort of female plumbing fitting. The narrow end is 3/8 inch in diameter; the wider, threaded end is 1/2 inch in external diameter. Ceramic products from these early strata included sherds of coarse tan earthenware tile (pipe). Judging by their general shape, these sherds probably represent remains of some type of sewer tile.

Utility-related items from the Gold Rush deposits include kerosene lighting equipment. Several pieces of a kerosene (coal oil) lamp were found in unit 25-D (Figure 5.9). The 2-5/8 inch diameter tube burner has lost all but one of the shade clasps. Nearly illegible embossing on the face of the wick turn handle reads N[?] 1683. . . 3.

A total of 541 sherds of lamp chimney glass was found in the trash deposits. Two types of rim decoration, a beaded rim (pearl top) and a scalloped rim (crimp top), were identified (Figure 5.10) (Pyne Press 1972:118-119; Woodhead et al. 1984:62).

Electrical supplies and lighting equipment found in the Gold Rush deposits included fragments of insulated copper and ferrous wire. A porcelain-lined yellow metal light bulb base (incandescent lamp) was found in the lower strata of the Operation 21 test trench (Figure 5.11a). This Thompson-Houston bulb base is not a screw-in type; rather it used a bayonet-type insertion into the light fixture. It has a 1/4 inch hole in the base. The wires from inside the bulb penetrate through the base through small holes on two oppostie sides, and made connections with the

Table 5.9: Utilities Inventory

UTILITIES Type	CLASS Description		FILL	GOLD RUSH	MIXED	POST 1900	STS 1983	STS 1985	F202 & F204	U25-D DIST.	UTILITIES TOTAL
Electrical	wire nut	hard black plastic w/closed end				1					1
	insulated wire	ANACONDA, copper w/bl plastic				1					1
	insulated wire	copper, wrapped		5							5
	insulated wire	ferrous coated, 1/8 inch d.	1	1							2
	insulated wire	plastic, white, 3/16 in. d.				1					1
	insulated wire	rubber, 1/4 inch.		27							27
	insulated wire	rubber, white, 1/8 inch d.		1							1
	insulator	porcelain, white					1				1
	insulator fgs.	porcelain, unglazed, tubular				1					1
	insulator fgs.	porcelain, white, rim	1								1
Heating	stove damper	ferous, slotted/spring loaded								1	1
	stove pipe	ferrous joint								1	1
Lighting	kerosene lamp	brass tube burner & fitting fgs.		7						8	15
	lamp glass	colorless	17	478	2	67	3	34	10	310	921
	lamp glass	colorless, beaded rim		5						2	7
	lamp glass	colorless, crazed		14							14
	lamp glass	colorless, scalloped rim		4				1			5
	lamp glass	colorless, rim		9				1		27	37
	lamp glass	frosted	3	30		5				21	59
	lamp glass	frosted gray glass		1		1					2
	light bulb base	blue glass base fragment	1			2					3
	light bulb base	ceramic liner fragments								1	1
	light bulb base	ceramic, bulb liner								1	1
	light bulb base	copper, small, 1/4 X 1/4 inch.		1							1
	light bulb base	red glass/white metal base fg.								1	1
	light bulb base	white metal & colorless glass									0
	light bulb base	yellow metal ceramic lined		2							2
	light bulb base	yellow metal/ ceramic lined, collared		1						1	2
	light bulb base	yellow metal Thompson-Houston		2							2
	light bulb base	metal & colorless glass, modern					1				1
	light bulb glass	colorless glass					3				3
	light bulb glass	colorless glass filament tube fgs.				2				5	7
	light bulb glass	frosted, thin								1	1
Plumbing	fitting	copper, female		1							1
	fitting	ferrous 1/2 in. male fitting		1							1
	fitting	yellow metal valve stem	1								1
	pipe	earthenware utility, coarse tan		6				1		26	33
	pipe	ferrous, 3-3/4 inch hub									0
	pipe	ferrous, 3/4 inch diameter									0
	pipe	redware utility, hard								18	18
	pipe	redware utility, soft orange								146	146
Road	asphalt	black petroleum product			1	1					2
Surfacing											0
											0
TOTAL UTILITIES			24	596	3	82	8	37	10	570	1330

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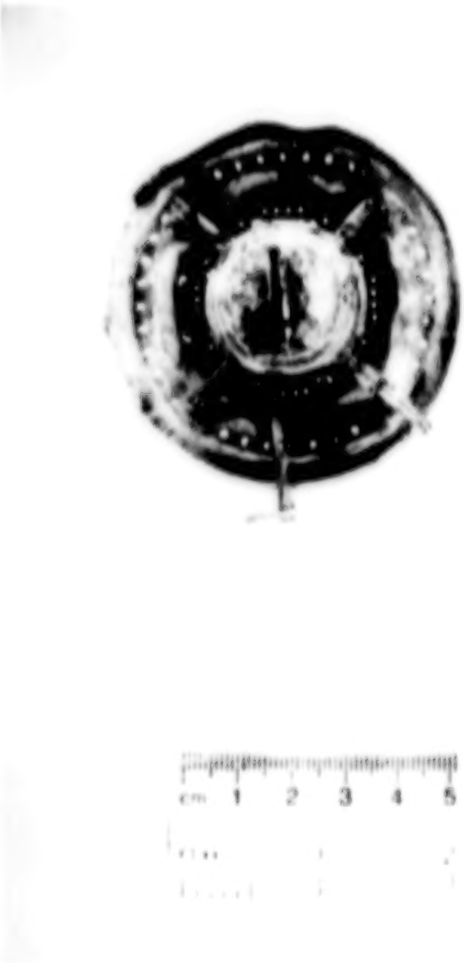

Figure 5.9: Kerosene lamp tube burner

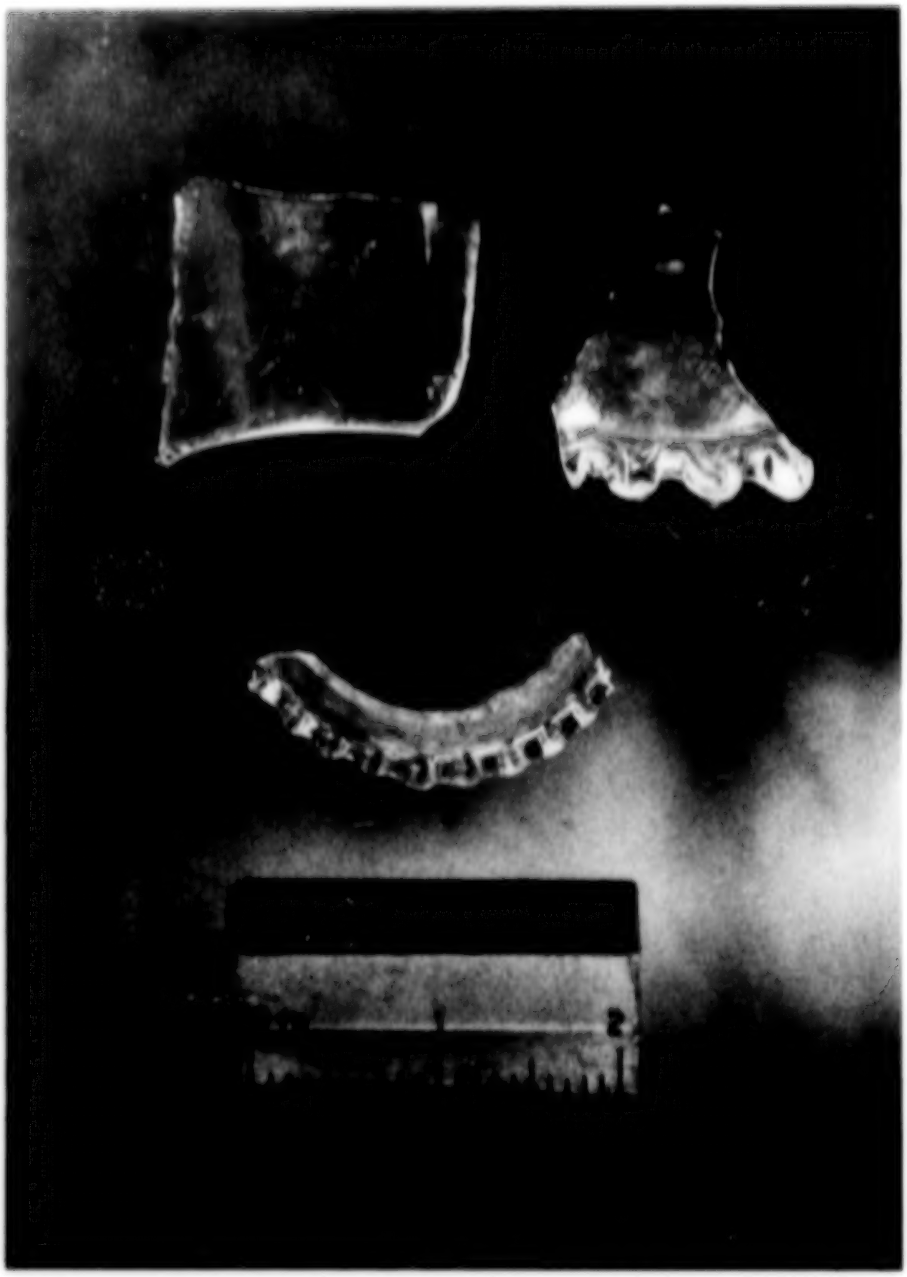

Figure 5.10: Assorted colorless glass sherds from kerosene lamp globes a) base of globe, b) scalloped (crimp top) rim, c) beaded (pearl top) rim

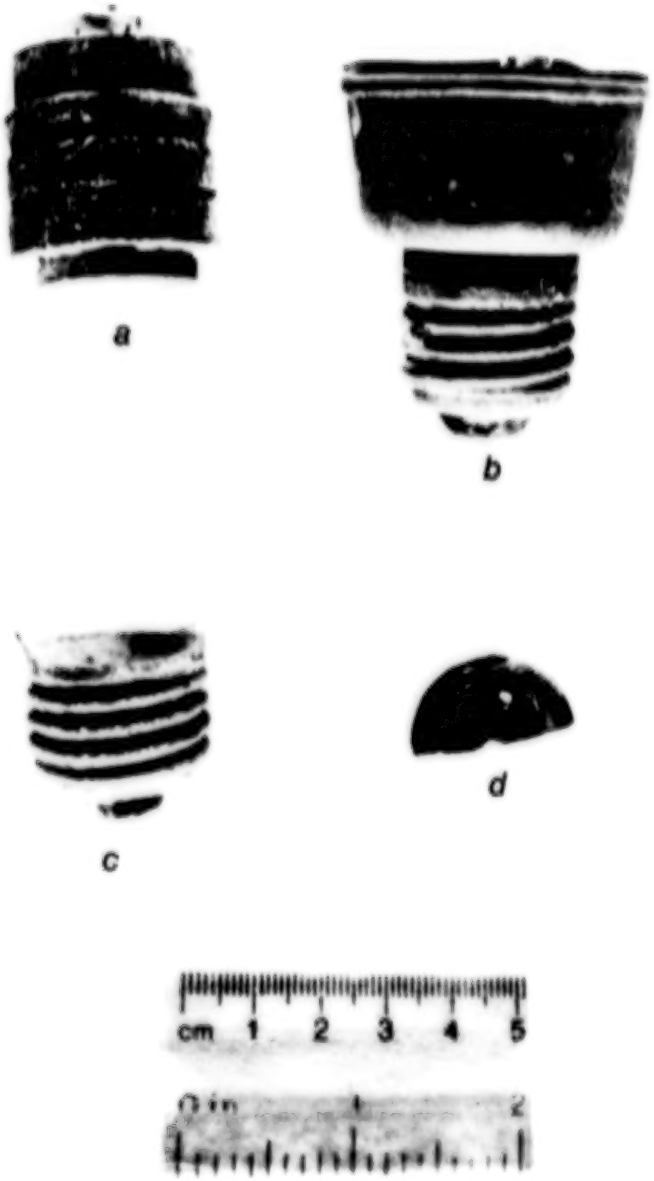

Figure 5.11: Light bulb parts a) Thompson-Houston bulb base b) Yellow metal screw-in Edison type bulb base with skirt c) Yellow metal screw-in Edison type bulb base, d) Portion of glass bulb base

wiring in the fixture. The inner tube (stem) in the bulb itself barely extends above the top of the base, and has a flat top rather than a pointed nipple typical of early Edison bulbs. This type of bulb was manufactured from the late 1890s through the early twentieth century, and was in use at the same time as the Edison bulbs (Herschey 1983).

Three heavy yellow metal, exterior threaded Edison type light bulb bases were also found in the Gold Rush deposits. The ceramic-lined bulb base has filaments encased in a closed, round glass tube or stem with a "pinched" looking top. The metal contact point on the base is 7/16 inch in diameter, somewhat larger than modern bulbs, which are 3/8 inch across. (The screw-in base was not standardized until the 1920s). An almost identical item with a heavy collar (skirt) was found in excavation unit 25D.D (Figure 5.11b). This skirt was used to prevent breakage while removing the bulb from the socket. The first Edison light bulb came in 1879; both the Thompson-Huston and Edison bulbs were in use at the turn of the century (Herschey 1983, 1987).

A black crayon-shaped graphite electrode was found in stratum E of unit 25-D (Figure 5.12). It is about 1/2 inch in diameter and 3-1/3 inches long. The top has a centered hole measuring less than .1 inch across; the bottom is tapered and appears worn. There is an indented circle about 1/8 inch below the top where the item has been inserted into a holder. Along one side, parallel to the long axis, is printed the word ELECTRA followed by 15 groups of 4 geometric figures which may be a repeat of an illegible Block style four letter word. This artifact was used in electric arc lighting (Nuce 1986; Herschey 1987).

The arc light, invented early in the nineteenth century by Sir Humphrey Davy, was not put into actual use until the latter part of the century (Ruoff 1903:315). Basically the arc light consists of "two graphite electrodes held in place by a support and two conductors connected to a source with enough current to make it operate" (Woodhead et al. 1984:74). The ends of the two electrodes are in contact until the lamp is lit. When the electrodes are moved apart, a spark arcs between

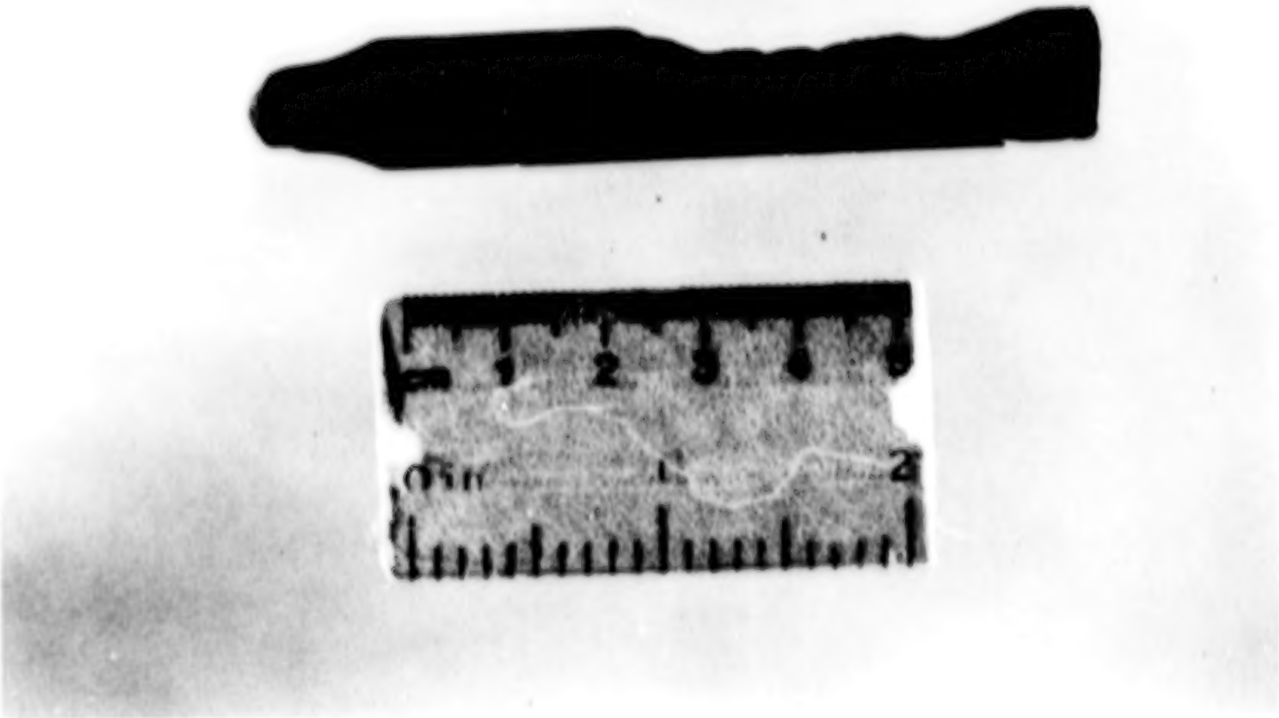

Figure 5.12: "ELECTRA" graphite anode from arc light

them. The approximately 100 volts of regulated current also flows through the solenoid which activates it to keep the top electrode a precise distance from the bottom one, thus maintaining a constant distance. "The solenoid keeps this distance constant as the electrodes are consumed and adjust it according to the voltage of the power supply" (ibid). The arc light was often used for street lights and movies because of its intense light, brighter than any contemporary incandescent lamps. A typical lamp could burn for 125 hours before the electrodes had to be replaced. Unlike the incandescent lamp, the arc light could be repaired, and therefore was seldom discarded. Arc lights were in use from the late 1870s until the 1950s when they were generally replaced by high-intensity incandescent lamps (Woodhead et al. 1984:74-75). An illustration in Woodhead et al. (1984:81) shows a graphite electrode similar to the one found near the Peniel Mission. In 1900 the local power company in Skagway advertised that the plant had the capacity of 50 arc lights so presumably there were at least a few of these types present in the city, possibly in use in a theater (Daily Alaskan, 1 January 1900:14).

The mixture of lamp glass and parts (n=548) and electrical wiring and lighting items (n=41) found in the Gold Rush deposits illustrates the transitional nature of the community--and of electrical power--as the community struggled to provide utilities for homes and businesses. It is likely that the mixture of lighting equipment was also due in part to competition between the advocates of Direct Current (DC) and of Alternating Current (AC). Eventually AC monopolized the market because DC would have required a much larger munber of power plants (Barnes 1988). Apparently there were at least two and perhaps three power companies doing business in Skagway before the turn of the century. The Skagway Directory for 1899 lists "The Skagway Light and Water Company" (355 4th Avenue) and the "Alaska Light and Power Company (553 4th Avenue) under "Light and Power Companies". A newspaper summary for the year 1899 notes that on January 11 of that year there was a "public protest against high prices of electric lights.--Proposition to start a new electric light company" (Daily Alaskan, 1 January

1900:14). During 1899 The Alaska Light and Power Company had advertised that their company:

> FURNISHES ELECTRIC LIGHT for Business and Residence purposes, J.M. Winslow, Mgr. Office and Power Station: Bond Street, Near Main (Daily Alaskan, 15 April 1899: 2).

Apparently there were problems with the service. The Daily Alaskan complained that

> the 'juice' is not turned on until nearly 8 o'clock in the evening compelling them to use lamps until such time as the electric light company turns on the current (11 May 1899:4).

On June 26, 1899, the City Council granted a franchise "to the new electric light company," presumably the Alaska General Electric Company which was organized on July 14, 1899 (Daily Alaskan, 1 January 1900:14). It is not clear what became of the previous electrical companies. A listing of city businesses published in the January 1, 1900 edition of the Daily Alaskan (p. 8) included the notation: "Electric light company--capacity 1000 incandescent and 50 arc lights, plant about to be enlarged." It is likely that structures that were wired for electricity still maintained their kerosene lamps for use during the frequent outages.

Only samples of the voluminous amounts of coal and clinkers that formed a matrix for the artifacts in the trash deposits were collected. Wood charcoal fragments were also present in these deposits, but in much smaller quantities. It seems logical to assume that much of the readily available firewood in the narrow Skagway River Valley had been cut and used by 1899. During the early part of the Gold Rush, ads for the City Wood Yard (corner of Main and 10th Streets) appeared in the daily paper. The Yard offered "All kinds of Wood in lengths to order Delivered to any part of the city. PORTABLE STEAM SAW (The Skagway News, August 26, 1898:3).

The Alaska Power and Telephone Company, Skagway, used wood to generate power up until about 1907 (See 1988). However, the railroad used coal for their trains. It is possible the railroad also used coal to generate power; they had their own electrical distribution system (Ibid.).

Coal was sold by the Skaguay Coal Company at Broadway and Second Avenue. Their stock included sacked "Gillman Double Screened Lump, Gillman Double Screened Nut [and] Wellington [Coal]" which was "Delivered to any part of the city" (Skagway News, November 25, 1898:1).

Coal brought in to Skagway during the early part of the Gold Rush was probably shipped aboard steamers from the west coast ports of Washington, Oregon, etc. However, after the railroad was built, it is likely that coal was imported from Dawson, or one of the other Canadian coal producing areas.

Mixed Deposits Utilities: Two fragments of clear lamp glass and a piece of asphalt road surfacing were the only utility-related artifacts found in these strata.

Post-1900 Utilities: Fragments of insulated wire and a modern "wire nut" were found in the upper levels of the Peniel Mission excavations. A total of 73 lamp chimney glass sherds were found here also. A small blue glass "nipple" with a white metal tip found in the upper levels of excavation unit 25-B is identical in shape and appearance to the red and white metal light bulb base fragment found in the disturbed stratum D of excavation unit 25-D. One piece of black asphalt came from the twentieth-century materials.

Excavation Unit 25-D Disturbed Strata Utilities: Fragments of the strainer-like portions of the base of a lamp tube burner (that is, the portion of the burner containing perforations for air intake) from stratum E were found in this stratum, along with 360 assorted lamp chimney sherds and fragments of several light bulbs. These fragments included one porous grey ceramic piece molded in the mirror image of the metal threading from a light bulb base. A molded, conical red glass sherd with traces of white metal clinging to the outside is probably from a light bulb base (Figure 5.11d). The interior of this item is stepped and very concave; the exterior is also stepped and is very convex.

A heavy yellow metal light bulb base was found in stratum D (Figure 5.11b). This exterior threaded, ceramic-lined item is identical to the base found in the Gold Rush deposits except it has a heavy collar around the top of the base.

A heavy circular ferrous object found in stratum D of excavation unit 25-D appears to be part of a stove damper (Figure 5.13). Two decorated projections on either side have screw holes for attachment. The body of this slotted item is 4-7/8 inches across; a 1-3/4-inch long by about 1/2 inch diameter shaft extends from the back of the object, and a heavy crossed wire spring runs to an attachment near the slightly raised rim.

A section of 2-3/4 inch diameter ferrous stove pipe was found in feature 213 (Figure 5.14). The 5-3/4 inch long pipe was created by wrapping a flat piece of sheet metal into a cylinder and fastening it with four rivets. Two parallel raised bands circle one end; these are 1 inch and 2-1/4 inches from the end respectively. A slightly uneven 3/8 inch by 1-3/8 inch hand cut slot extends up to the first band. The other end has a series of uneven cuts about 3/8 to 1/2 apart, made parallel to the long axis. The cut strips have been bent outward as if to fasten the pipe to a flat surface.

In response to numerous chimney fires, the city set up a special committee for the inspection of chimneys and flues in 1899. The committee, headed by City Councilman John Laumeister, enlisted the aid of the city's tinsmiths who were to inform Laumeister whenever they encountered a defective chimney. The Daily Alaskan noted that

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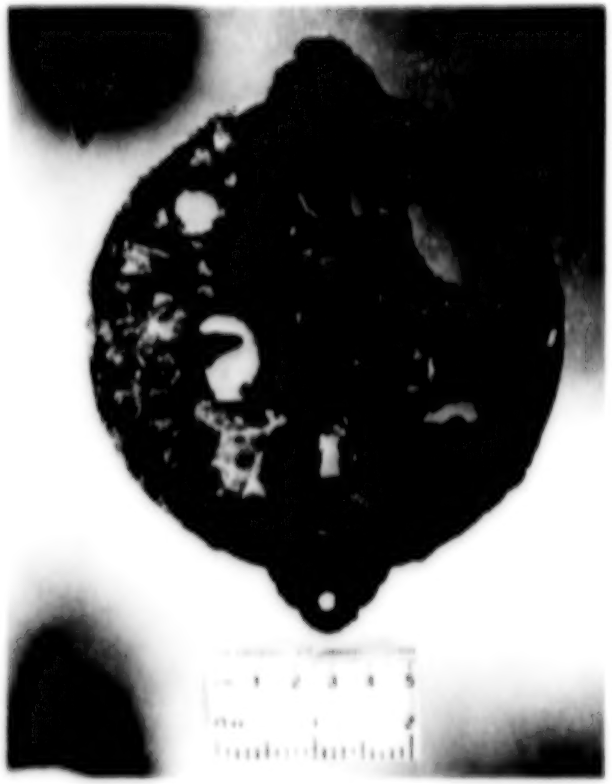

Figure 5.13: Spring-loaded stove damper part

Figure 5.14: Ferrous stove pipe segment

> Since the last two fires and the agitation consequent, the streets are filled with people going home with new stovepipes and chimney material under their arms . . . . (September 12, 1899:4)

In March, 1900, the city council passed an ordinance making it illegal to put in flues or chimneys of tin, sheet or galvanized iron. After September 1, all flues and chimneys were to be made of brick (Daily Alaskan, 27 March 1900:2). No doubt a number of poorly built chimneys were redone during this period; the stovepipe found in this stratum may have been from such a project.

A galvanized ferrous male pipe fitting, approximately 1/2 inch in interior diameter, threaded on one end and cut across the other, was found in this stratum. It appears to be part of a 1/2-inch nipple plumbing fitting, original length unknown.

Two other pieces of pipe were found in this disturbed stratum. One is a heavy ferrous (probably cast iron) sewer pipe, measuring 3-3/4 inch in internal diameter by a foot long; the other is a 3/4 inch internal diameter galvanized ferrous pipe 26-3/4 inches long, probably used for water distribution. The short section of sewer pipe has a bell-shaped enlargement (a hub) on one end meant to join with a cylindrical "spigot" section of pipe (Popular Science 1974:1242). Generally this type of joint was packed with oakum (a braided hemp saturated with tar), then molten lead was poured over the join to prevent leaking. Both pipes have been cut, the smaller with a saw, and the larger with a saw or torch. The galvanized pipe is threaded for about 3/4 inch on the uncut end. The sewer pipe still smells of sewage. These pipes were no doubt associated with the plumbing system for one of the area structures, but their date and association are unknown.

The Skagway Light and Water Company's advertisement in The Skagway News warned--"DON'T RISK YOUR LIFE BY DRINKING SURFACE

WATER" and stated that by about June 20, 1898, the company was "prepared to furnish the citizens of Skaguay with Pure Water from the Glaciers AT REASONABLE PRICES" (17 June 1898:3).

A new water works franchise was applied for in mid-March, 1899. By the turn of the century a 3,000,000 gallon reservoir had been built on the mountainside east of Skagway, 825 feet above the city (Daily Alaskan, 1 January 1900:8,14). Evidently, by the spring of 1899, the original wooden water mains had been at least partially replaced by iron pipes, for an article in the daily paper for April 30 noted that

> the main in Third Street is steel, and it froze quicker in that than in the others, and it will also thaw quicker than the wooden ones (Daily Alaskan, April 30, 1899:1)

The service line leading from the main to the fire plug on the corner of Third Avenue was also of iron (ibid). Another article, written about a month later, noted that water mains were to be run in Sixth Avenue (Daily Alaskan May 9, 1899:1-2). Unfortunately, it is not known how far east the line was run, or where the lines were placed in relation to the Peniel Mission.

On June 22, 1899, contracts were signed for the lowering of the water mains to a six foot depth; the job was completed in mid-September. It was, however, late October before additional hydrants and supplies to upgrade the system arrived in Skagway (Daily Alaskan, 1 January 1900:14). By the end of the year fire hydrants had been installed at the intersection of all the principal streets. Some of the hydrants were evidently cut-rate. Fire Warden Heins complained about the hydrants in a March, 1900 newspaper interview:

> the present hydrants are poor and liable to give trouble at any time during cold weather . . . they ought to be replaced with some of a more modern pattern, as those now in use are of the same kind as San Francisco discarded as long ago as 1876 (Daily Alaskan, 15 March 1900).

By October of 1904, a new $18,000 municipal water system had been completed (Spude 1983:32).

Summary

The Structural Group artifacts account for about 36% of the total items recovered from the Peniel Mission excavation. The largest portion of the structural items comes from three material types, nails, brick and mortar and flat glass.

DOMESTIC GROUP

Introduction

This group was subdivided into seven classes, Beverage Storage, Food Storage, Food Serving, Food Preparation, Food Remains, Furnishings, and Pharmaceutical. Curved glass sherds were placed in several different classes within the Domestic Group. Based on the assumption that there is at least a weak correlation between glass color and function (Blee 1983b:56; Blee et al 1986:45-46; Baugher-Perline 1982:271-272; and Teague and Shenk 1977:114), non-diagnostic body sherds of "black", green, olive green, and brown glass were included in the Beverage Storage class. This inclusion is supported by the presence in the collection of a number of liquor bottle finish fragments of olive green, green, and brown glass, as well as numerous fragments from olive green wine/champagne bottle bases. A few light green and bright green sherds were also assigned to the Beverage Storage Class.

For the most part, panelled glass and very thin clear glass was included in the Pharmaceutical class unless otherwise identified. Similar criteria were applied to aqua glass where most of the non-diagnostic body sherds were assigned to the Food Storage Class. Reconstructed items and diagnostic lip finishes provide additional documentation for this decision. The aqua glass sherds included in the Beverage Class were identifiable as fragments of soda water bottles, and brandy and wine/champagne style finishes.

Laboratory analysis of the curved glass sherds focused on determination of original function, contents, and probable manufacturing period. Nineteenth and twentieth century glass manufacturers' catalogs, books on bottles, and archeological reports on period sites containing descriptions of artifact attributes were used to ascertain bottle function and/or contents, and probable age.

The method of manufacture was also documented wherever possible. Technological advances in glass production during the nineteenth and early twentieth centuries helped standardize bottle forms and left diagnostic "markers" (i.e. seam placement and mold marks, bottle finish, embossing, glass color, etc.) that can be used to help date artifacts and determine their function. However, rather than reiterate descriptions of the glass manufacturing techniques that are readily available in various standard texts and reports, this report has included as Figure 5.15 a graphic description of bottle morphology and nomenclature, manufacturing dates, and technology.

The Parks Canada Glass Glossary (Jones and Sullivan 1985) was used as a basic reference for much of the terminology, dating, and glass manufacturing techniques. A generalized nomenclature (Figure 5.15), drawn from widely varied sources, was developed for those items from this excavation which were not specifically defined or illustrated in the Glossary. Because of the project scope and the difficulties in analysis, no attempts were made to separate the colorless glass by categories such as soda-lime, potash-lime, or potash-lead.

BEVERAGE STORAGE CLASS

All artifacts which may have been used for the storage of beverages were put in this class. Included are sherds from alcoholic beverage and soda water bottles, stoneware jugs, and closures such as crown caps, corks, bottle seals, and pop-top tabs. An inventory of the beverage storage artifacts can be found in Appendix A.1 and a summary of the findings appears as Tables 5.10 and 5.11. Where necessary, some additional explanations are included in the text. Figure 5.15 covers bottle morphology and nomenclature.

Of the 6194 beverage related items recovered during the Peniel Mission excavations, there were only four whole bottles. However, several items were reconstructed, and many of the sherds retain enough

Table 5.10: Beverage Storage Artifacts

BEVERAGE STORAGE CLASS Type	Description	FILL	GOLD RUSH	MIXED	POST 1900	STS 1983	STS 1985	UNIT 25D DIST	F202 & 204	TOTAL ALL	TOTAL EACH TYPE
soda water bottles, glass										0	0
whole	aqua, crown							3		3	
fragmentary	aqua, crown							37		37	
fragmentary	colorless, Hires		5							5	
fragmentary	lt green, round bottom							3		3	
										0	
alcoholic beverage bottles, glass										0	
whole	colorless, brandy/whiskey							1		1	
fragmentary, identifiable	black glass, case		1							1	whole bottles
	brown, identifiable		6					18		24	4
	brown, 3-pc mold							16		16	partial bottles
	colorless				1					1	67
										0	
flask/decanter sherds, glass	amethyst		4							4	flask sherds
	colorless		46					2		48	52
										0	
bottle base sherds, glass	black	1								1	
	brown	1	24		11	2	7	39		84	
	light green							1		1	base sherds
	olive green	1	68		3		2	38		112	198
										0	
bottle finish sherds, glass	amber							1		1	
	aqua							6		6	
	brown		10		1		4	20		35	
	colorless		7					2		9	
	bright green	1								1	
	light green						1			1	finish sherds
	olive green		28		6		6	13		53	106
										0	
bottle body sherds, glass	amber		2				1	81		84	
	black				1					1	
	brown	53	710	10	173	15	105	862		1928	
	bright green	5			8			1		14	
	dark green/green	1	11	1	2	2				17	
	olive green	17	1759	12	228	8	89	1519		3632	body sherds
bottle body sherds, stoneware	brown, lead glazed		2		2					4	5680
										0	
closures										0	
bottle seals, white metal		8	13					3		24	
cork							1	2		3	
crown caps/lgs. ferrous		4	16		1			12		33	
pop top lgs, aluminum		1								1	
screw caps, ferrous					1					1	
screw caps, white metal			2					1		3	
stopper, ferrous/cork					1					1	closures
stopper, white metal/cork								1		1	67
TOTAL		93	2714	23	439	27	216	2682	0	6194	6194

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Table 5.11: Summary of Beverage Storage Artifacts

BEVERAGE STORAGE					
bottles and ID sherds	number	% of total			
alcoholic beverage	43	0.7%		olive green body	3632
flask sherds	52	0.8%		olive green finishes	53
soda water	48	0.8%		olive green bases	112
other bottle sherds		0.0%			
base sherds	198	3.2%		brown body	1928
finish sherds	106	1.7%		brown finishes	35
body sherds	5680	91.7%		brown bases	84
closures	67	1.1%			
	6194	100.0%			
amber glass sherds	85	1.4%			
aqua glass sherds	43	0.7%			
brown glass sherds	2087	34.1%			
black glass sherds	3	0.0%			
colorless glass sherds	63	1.0%			
light green glass sherds	5	0.1%			
bright green glass sherds	15	0.2%			
dark green/green glass sherd	17	0.3%			
olive green glass sherds	3797	62.0%			
		0.0%			
TOTAL GLASS	6124	100.0%			

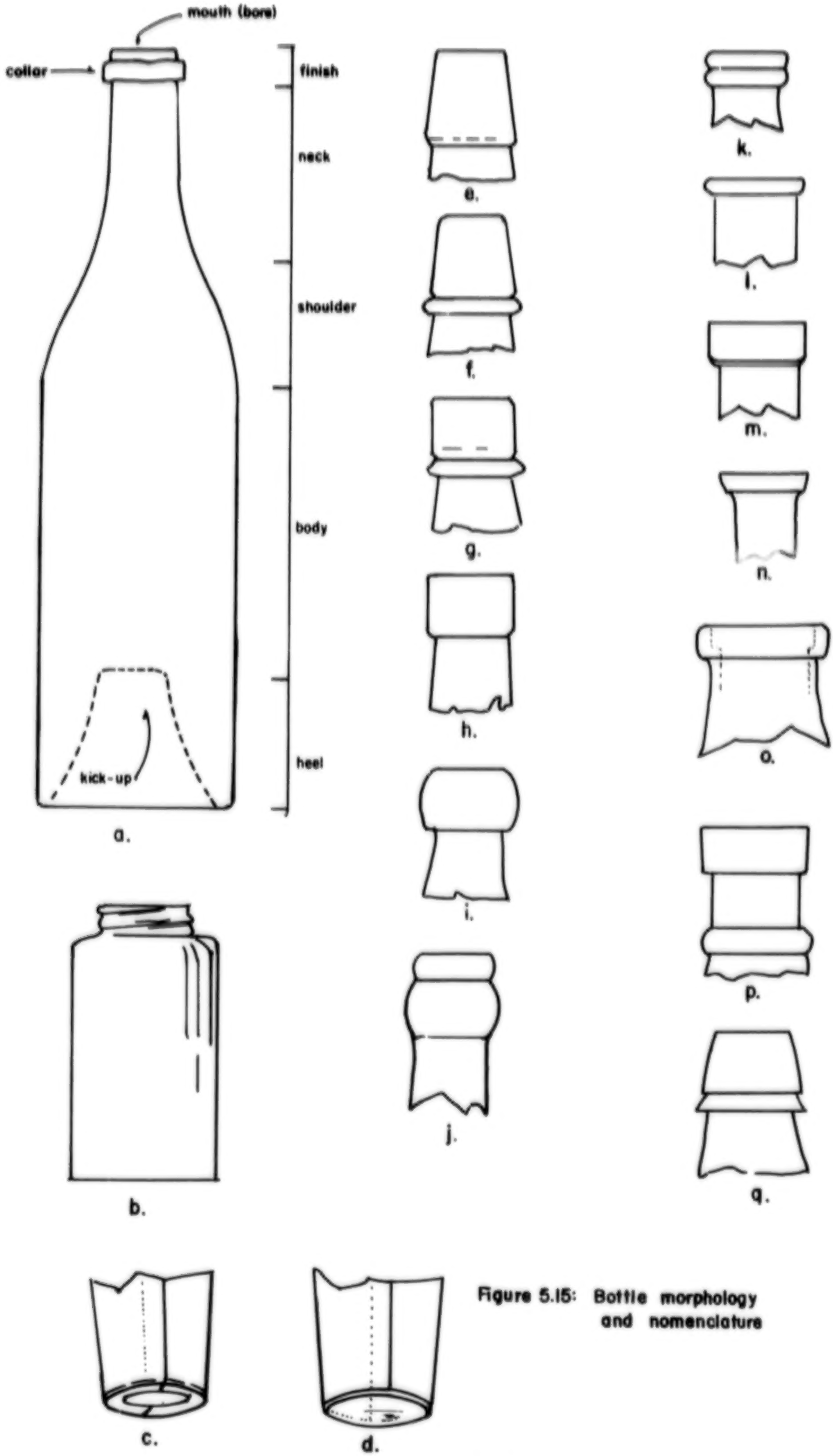

Figure 5.15: Bottle morphology and nomenclature

Type/Use	Description and Reference	Date in Use
a. Wine/champagne bottle	Cylindrical body, champagne finish formed with finishing tool, with wired cork closure, round kick-up base, tapered cylindrical neck, cylindrical bore, turn mold, straight heel, shoulder tapered to neck (Berge 1980:57, 91, 92; Firebaugh 1983:11; Toulouse 1969a:531-532; Jones and Sullivan 1958:30-31).	1880-1913 Turn-molds popular 1870-1920s
b. Canning jar	Shoulder seal, continuous thread finish (Toulouse 1969b:429; Ward et al. 1977:237).	1880-
c. Bottle made in post-bottom mold	Side seam crosses heel to join basal seam (Toulouse 1969a:580; Munsey 1970:39; Jones and Sullivan 1985:45).	
d. Bottle made in cup-bottom mold	Side seam joins heel seam; base is seamless (Toulouse 1969a:583; Munsey 1970:39; Jones and Sullivan 1985:45).	2-pc. mold used after 1841
e. Brandy or oil finish	One-part down-tooled lip, also known as tapered lip (Herst 1987). Smaller version known as oil finish, frequently used on small oval liquor flasks, castor oil bottles. Larger brandy finish found on liquor bottles (Berge 1980:57; Firebaugh 1983:11; Putnam 1965:20).	
f. Brandy with bead finish	Two-part down-tooled collar/large oil finish lip with bead or ring. Also known as tapered collar lip (Berge 1980:56-57; Firebaugh 1983:11; Putnam 1965:20; Herst 1987).	
g. Short brandy with bead finish	Identical to f. except for height of collar, and may be either flattened (see illustration or down-tooled as in e. Bead/ring may be angular (V-tooled) or very rounded (Firebaugh 1983:11; Jones and Sullivan 1985:95).	
h. Collar finish	One-piece, flattened, symmetrical cylindrical finish, (Firebaugh 1983:11)	
i. Beer finish	Similar to h. but is rounded and has more pronounced lip on base of collar to hold wire fastener in place. Collectors call this a "Blop" top (Putnam 1965:256; Wilson 1981:4; Herst 1987).	After 1880

Type/Use	Description and Reference	Date in Use
j. Crown finish	Made especially for crown cap, after ca. 1889-1892 (Berge 1980:56, 58; Ward et al. 1977:239; Jones and Sullivan 1985:88; Herst 1987)	Late 1890s - replaced other beer and soft drink closures by 1924.
k. Double bead or ring finish	Two-part string lip. Upper ring may be quite sharp in profile, or identical to lower ring. The more pointed types were used on Citrate of Magnesia bottles (Berge 1980:56-57; Firebaugh 1983:11; Putnam 1965:20).	
l. Extract finish	Has rounded up-tooled, rolled lip edge and flattened sealing surface. Used on many extract bottles (Berge 1980:55-56; Firebaugh 1983:11; Putnam 1965:20; Jones and Sullivan 1985:82,92-93).	
m. Packer finish	A wide one-piece patent finish, used on many culinary bottles (Berge 1980:55-56; Firebaugh 1983:11; Putnam 1965:20; Jones and Sullivan 1985:89,93).	
n. Prescription finish or lip	Slightly flared, one-part finish often used on patent medicine bottles. Patent finish is similar, but is a flattened one-part finish (Berge 1970:55-56; Firebaugh 1983:11; Jones and Sullivan 1985:93).	Late 1800s
o. Packer finish, milk bottle	Packer finish with cap seat in neck bore for cardboard cap (Munsey 1970:191; Putnam 1965:232)	After 1889
p. Packer with bead finish	Commonly used on squat condiment jars. Also called a ball neck (Jones and Sullivan 185:98) or extract neck (Herst 1987). (Putnam 1965: 186, 193, 201).	
q. Double collar finish	Two-part broad sloping collar with narrow V-shaped bead used on a variety of beer, bitters and liquor bottles (Putnam 1965:136; Wilson 1981:38; Jones and Sullivan 1985:89).	
r. Continuous thread (not illustrated)	Requires screw cap. (Berge 1980:56-57; Firebaugh 1983:11; Lief 1965:27-29).	Popular after 1924

*The terms "bead" and "ring" are used interchangeably in this report. Jones and Sullivan use the term "string" rim (1985:95). See also their explanation on page 82. "Tooled" refers to the use of a finishing tool to shape the bottle finish.

of the original vessel shape to determine probable contents and/or function. The manufacturer and probable range of manufacturing dates could also be determined from some of the embossed sherds but the majority of the bottle base and finish fragments found in the Peniel Mission excavations could not be identified beyond the type of finish and/or the technology used for shaping the base. Unidentifiable body sherds account for the majority of the recovered curved glass.

With the exception of strata in unit 25-D, the glass sherds found in disturbed portions of the site are not included in the general discussion because their provenience is suspect. These artifacts are, however, listed in the Beverage Storage Inventory (Appendix A-1).

Gold Rush Period Beverage Storage: The glass sherds found in the pre-1900 Peniel excavations vary widely in size from tiny slivers to partial bottles. While the bottle glass found here does not show the striations, color changes, and wear normally associated with long-term surface deposition, a number of the sherds obviously had been heated or burned, and some were water-worn.

The large number of beverage bottle sherds recovered in this excavation, particularly those from wine and champagne bottles, suggests the importance of alcoholic beverages to those who followed the lure of gold northward to Skagway. One of the identifiable items found in the Gold Rush deposits is a partial brown bottle embossed with the words "E MOORE: G BOUR JESSE M O SAN FR . . . ." (Figure 5.16). This cup-molded whiskey bottle[1], and fragments of another similar bottle bearing the embossed letters "O / RBO /& and ORE / RANC," were probably made in San Francisco and distributed by the Jesse Moore-Hunt Company. George H. Moore, son of company founder Jesse Moore, and Henry Browne Hunt were the major partners in the company which was consolidated under the Jesse Moore-Hunt name in 1896 or 1897, operating

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[1] See figure 5.15d for a description of this mold type.

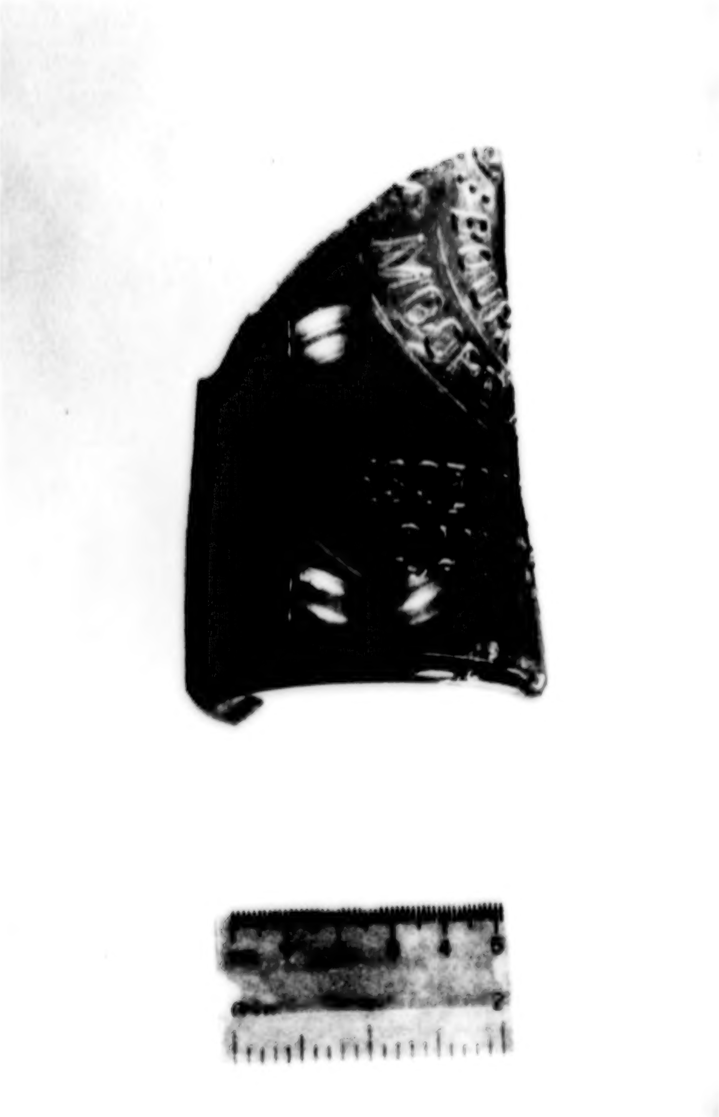

Figure 5.16: Jesse Moore bourbon whiskey bottle base from excavation unit 25-B.H.L2.

in San Francisco until 1918 (Herst 1987; Wilson and Wilson 1968:87-88). We know that this beverage was available in Skagway during the Gold Rush period because advertisements in the local paper specify that Jesse Moore whiskey was sold at the Mondamin Annex (Daily Alaskan, 22 February 1900:2). The Mondamin was a popular local hotel located at the northwest corner of Sixth and Broadway. (It is not clear if the Mondamin Annex was immediately adjacent to the hotel or not.)

Other artifacts which were probably part of liquor bottles include bottle lip and neck fragments with a brandy finish (Figure 5.15e and f). One example of this type of bottle was found in the lower levels of excavation unit 25-B. The tooled finish was shaped onto a long neck whose seams had been obliterated by the lipping tool. Rust stains and heavy, gray deposits partially covered the vertical stretch marks on the bottle surface near the finish.

Determining the probable original contents of this type of bottle is difficult since archeological reports, collectors books, and period manufacturers catalogs all list a variety of alcoholic beverages--from bitters to whiskey--using finish similar types. It is assumed, however, that these bottles originally contained some type of liquor.

Some of the colorless glass sherds found in the Gold Rush strata mended to form portions of several flasks. These flasks are wide shouldered, tapering to a somewhat narrower base. Six side seams define the flat front and back faces of the body and the rounded shoulders; the seams do not continue to the top of the finish.

The "shoo-fly" or "casket" flask has a tooled brandy with bead finish and a short, irregular, "swirled" looking neck (Figure 5.17). One shoulder seam continues up into the neck area where it curves into the twisted design. The crudeness, irregularity, and molten appearance of the neck make it impossible to determine whether the swirled effect was done deliberately as a decorative device known as a swiveled neck, or if it was a result of an error during the manufacturing process (Putnam 1965:161, 164-170; Berge 1980:59).

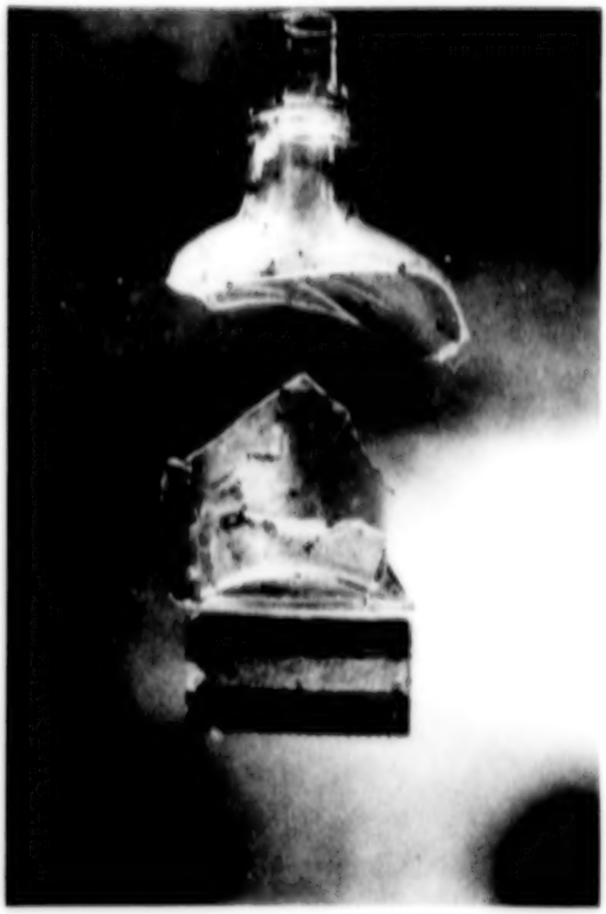

Figure 5.17: Partial "shoo fly" flask from trash deposits in excavation unit 25-B

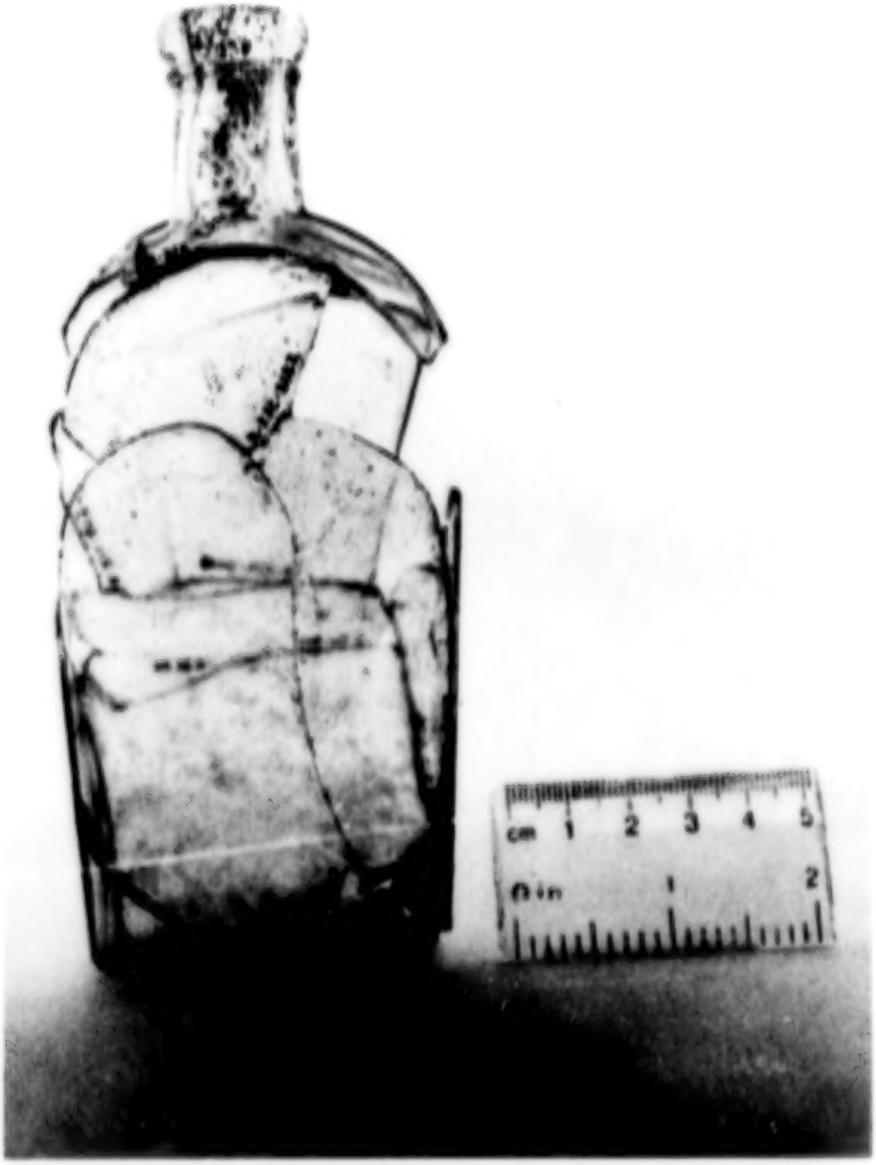

Figure 5.18: Mended colorless glass flask from test trench Op. 21

Ferraro and Ferraro (1966:98) date the shoo-fly flask between circa 1890 to 1910. The oval cup-molded base of the shoo-fly flask is embossed with a "P" inside a circle. A "ghost" reflection of the embossment is visible to one side and slightly below the raised letter. Toulouse (1971:412) suggests that the "P" stands for the Pierce Glass Company, St. Marys, Pennsylvania. The Pierce Glass Company was in operation between about 1905 and 1917; somewhat too late for deposition in this stratum.

Another flask resembles what is called a "Union Oval" in period manufacturer's catalogs (Figure 5.18) (Putnam 1965:178). The Union Oval is also short necked, but has a tooled double bead finish (Figure 5.15k). The Union Oval and similar flasks listed in the Illinois Glass catalog for 1903 are, for the most part, glass-stoppered (Putnam 1965:168-170). The interior of the finish recovered from the Peniel excavations has not been ground; it may be that this item had a cork-covered glass or metal stopper.

Olive green glass sherds make up the largest proportion (61%) of the glass beverage container fragments recovered from the Peniel Gold Rush period excavations. The majority of the sherds came from wine or champagne bottles. These bottles were heavy-walled with a deep, round, kick-up base, a tapered cylindrical neck, and a cylindrical bore (Figure 5.15a). Shoulders tapered to the neck; heels (foot) were straight. These bottles lacked seams, were highly polished, and often showed horizontal striations--characteristics of bottles blown in a turn mold. The term "turn mold" refers to a process in which the bottle was turned in the full-height mold while the glass was still hot. The interior surface of the mold was specially treated with a soft, water absorbent paste which imparted a sheen to the finished bottle, and facilitated the turning process. Obviously bottles made in a turn mold cannot be embossed, but their general appearance, resembling hand blown bottles, was thought to provide special appeal to the purchaser. Turn molds became popular in the United States between 1870 and World War I (Toulouse 1969a:531-532).

Among the olive green glass sherds are 23 wine/champagne bottle neck and lip sherds, the bottle "finish". In most cases this finish consists of a narrow band of glass that has been separately applied to the bottle top, and then shaped or "tooled" with a lipping tool. This process smooths the glass around the lip, leaving "stretch" marks or striations on the bottle neck. On a few of the items, the glass on the bottle neck was shaped while the glass was still plastic, using a lipping tool to form the lip finish.

Some authors such as Berge (1980:56-57) separate wine bottles from champagne on the basis of size and/or neck taper. To quote Berge:

> Commonly found on champagne bottles, this finish differs from that on wine bottles in that the sealing surface is slightly tapered upward toward the bore. The common "wine finish" does not have this taper. It is instead flat, though the ring around the neck is yet below the aperture (1980:57).

No such distinction was made in this study since most items are fragmentary, and show varying amounts of taper.

Only a few other types of olive green bottle finish sherds were present in the Gold Rush deposits, including a beer or soda finish, and several others from a bottle with a tooled, laid-on collar (Figure 5.15 i and h).

Sixty-one olive green "kick-up" bases were also found in the Gold Rush period deposits, far outnumbering any other type of bottle base (Figure 5.15a).

Although the kick-up base was occasionally used for other types of liquor, it is most commonly found on wine and champagne bottles, and the assumption is made that these heavy olive green sherds came from wine or champagne bottles. The heavy glass is ideal for storing effervescent beverages, the dark color protects the beverage from spoilage, and according to tradition, the deeply indented base allows any remaining sediment to settle out before serving. Most of the other olive green bottle base sherds listed in the artifact inventory are too small to determine whether they were one part of a kick-up base, or are from another type of bottle entirely. However, their general configuration, turn-mold striations, color, and weight strongly suggest that these items were also part of a heavy container like a wine bottle.

Champagne is a sparkling wine that originated in the old French province of Champagne which now includes the department of Marne and several other areas on the great northern plains near Reims (Rheims), France. Development of this special variety of wine was accidental. The soils of Champagne are poor and the climate is cold and harsh. The cold, damp climate often affected the fermentation process, resulting in unsatisfactory wine (Kogan 1987). A successful process in which the wine was fermented a second time was developed during the seventeenth century; its development is attributed to the blind monk Dom Pierre Perignon of the Benedictines (Encyclopaedia Britannica 1973: 583; Kogan 1987). This process resulted in bubbly "devil's wine." Even before the eleventh century, Reims was traditionally the site chosen for the coronation of France's kings, and the local wines were served at the elegant repasts accompanying the ceremonies. Eventually, champagne became known as the drink of kings, and its popularity grew throughout France. By the end of the 1800s this wine was fairly well developed and had become quite popular along the west coast of the United States, particularly in San Francisco. However, the sparkling wines produced between 1890 and 1910 were not standardized as they are today, and their quality and sources varied. Champagne was still new enough to many Americans to make it a highly desired item.

Several types of brown glass bottle finishes and finish fragments come from the Gold Rush collection. One of these, a V-tooled, laid-on brandy with bead lip design, was well adapted to a wire bail or wired cork stopper since the bead helped hold the wire in place (Figure 5.15f). Similar finishes on "export style" beer bottles are illustrated in Wilson (1981:4).

Seven crown finishes of brown glass were found in the pre-1900 strata (Figure 5.15j). These bottles may originally have held beer; similar finishes are illustrated in Berge (1980:127-128). Some of the crown finishes found in the Gold Rush dump appear to have been made in two steps; that is, a glob of molten glass was separately applied to the bottle and then shaped ("wiped") into the lip with a lipping tool. In other instances, it appears that the top of the still-warm glass bottle was shaped with the lipping tool. One example of a machine made crown top, its side seam crossing a second, horizontal, seam just below the finish, was also found in the lower levels of this unit.[2]

Of the 35 brown glass bottle lip finishes and finish fragments from this collection, the crown finish is among the most common. While a somewhat similar finish may have been used for bottles created with a bail or lightning stopper, for all practical purposes the crown finish and crown cork stopper were introduced by machinist William Painter somewhere around 1892 (Painter filed for his first patent in 1889, and eventually was granted patents for three types of crown cap in 1892) (Lief 1965:17).

Most of the amber and brown base fragments found in this excavation probably come from beer or liquor bottles. Nineteenth-century beer bottles came in an assortment of glass colors, but amber or brown seems to have been preferred over all others, perhaps for its added protection against light and heat (Wilson 1981:2; Baugher-Perlin 1982:270-271).

Several brown, embossed bottle bases and base fragments were found in the lower levels of excavation unit 25-B. These bottles were manufactured using a post-mold (Figure 5.15c). Inside the circular basal seam, one sherd has the embossed legend "S B & G CO 4"; the other reads "S B & G CO 7." These bottles were made by the Streator Bottle & Glass Company, Streater, Illinois, between 1881 and 1905 (Toulouse 1971:461-463).

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[2] See the discussion on the semi-automatic bottling machines and crown finish later in the excavation unit 25-D.D findings.

The rest of the embossed brown and amber glass sherds are too small to identify. Such items include a body sherd found in stratum E of unit 25-D. It has the letters "R E &" inside two parallel curved lines, above the letter "M." Other brown body sherds from this stratum, embossed with the letters "S BRE [WING]" and a curvilinear logo, mend with sherds from stratum D. Another brown body sherd from the lower levels of excavation unit 25-D is embossed with block letters which read "CHA 4 = ." These letters may stand for "champagne beer," or for the maker's name.

Excluding embossed sherds identified as liquor bottles, small sherds of brown glass, most of which are assumed to be from beer bottles, comprises 27% of the beverage glass sherds found in the Gold Rush deposits. During colonial times, homebrewed ale and porter satisfied the nation's thirst for malted liquors. Lager (or "real") beer was introduced into the United States in about 1842, replacing ale in popularity by 1870 (1976:476; Thomann 1909:57-67). Until the 1880s, beer was stored and shipped in wooden kegs. Its keeping qualities were so poor that it had to be used within a short time. Tax laws passed during the Civil War made it illegal for brewers to bottle their own beer so bulk beer was shipped to a bottler who processed and bottled the brew, adding his name rather than the brewer's to the bottle. During the last quarter of the nineteenth century, improvements in bottle closures and various technological advances such as pasturization made the shipping and long term storage of bottled beer feasible, and the beer industry grew rapidly.

By the turn of the century, beer had caught the public's fancy. Beer was lighter, had a lower alchoholic content, and was less expensive than distilled beverages. Beer manufacturers hailed the increased consumption of beer, and the corresponding decrease in use of distilled liquors, as a step towards temperance (Thomann 1909:65). While Skagway's beer consumption was evidently lower than that of champagne or wine, the presence of relatively significant percentages of brown glass suggests that the national trends towards consumption of beer may be reflected here also.

A portion of a "black" glass (dark olive green) bottle base was found in the lower levels of excavation unit 25-A. This heavy, angular bottle sherd has a textured pattern of small indentations or dimples on the exterior, possibly from a "shingle" mold (Herst 1987). This sherd probably comes from a case bottle. The angular design of case bottles or their "direct descendents" is well adapted to "safe and convenient transport" (Freeman 1964:249). Black glass case bottles were used for over two centuries for such beverages as bitters and schnapps. Often these bottles had embossed designs, fancy panels, fluting, and inscriptions. A variety of square and rectangular bitters and schnapps bottles (squat bitters, Hamburg bitters, panelled schnapps, etc.) are illustrated in a circa 1903 Illinois Glass Company catalog (Putnam 1965:152, 159-163). There is another possibility as well. According to Herst (1987), this artifact may have been from a post-1870 case gin bottle.

According to Watson (1965:39-40), the "dark glass was supposed to shield the contents from damage by the sun which had a deleterious effect on the herbs". In addition, a heavy dark deposit tended to collect in the bottom of bitters bottles; and the dark glass hid the unappetizing sight. Watson also suggests that the dark glass gave an "aura of the mysterious to the contents" (1965:40).

Bitters are an

> herbical medicine containing a great quantity of alcohol, frequently corn whiskey. The name bitters comes from the taste of the bitter roots and barks which were added along with other spices. There are two kinds of bitters, medicinal and flavoring (Ferraro and Ferraro 1966:96).

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The sale and distribution of bitters began in the 1700s with production of small bottles containing medicinal and/or flavoring ingredients. Their popularity reflected the primitive state of medicine; people lived constantly with the fear of illness and epidemic. Nostrums concocted by local midwives and druggists were sought eagerly by the public.

Several other factors contributed to the increase in production of bitters during the 1800s. The temperance movement gained momentum during the nineteenth century, and several eastern states passed restrictive legislation which effectively reduced the liquor traffic over large areas. Passage of the 1862 Internal Revenue Act raised the cost of alcoholic beverages. Bitters, heavily advertised in medicine shows and via word of mouth, were an inexpensive and socially acceptable way to imbibe.

While the term schnapps can be used to refer to a variety of distilled liquors, it most generally is used for a strong Holland gin. Gin is a flavored, distilled liquor made from grain mash. Juniper berries are used as the principal ingredient in flavoring, along with combinations of various botanicals including such items as licorice roots, lemon peel, coriander, orris, anise, fennel, etc. (Encyclopedia Britannica 1983:547).

A partially reconstructed colorless glass bottle from unit 25-B probably contained some sort of soft drink. This round heeled bottle has the embossed inscription "HIRES / 269" in the center of the post molded base (Figure 5.19). An illustration in Ferraro and Ferraro (1964:36) shows what appears to be a crown finished glass bottle with "HIRES / CARBONATED / BEVERAGES" embossed on one side. In discussing bottle shapes, these authors suggest that this Hires soda water bottle is a good example of one of the type [presumably style] "which made the transition from old to new" (1964:35). No further description or date is given for this item. The world's largest root beer manufacturer, the Charles E. Hires company of Philadelphia, registered the trademark "Hires Improved Root Beer" on April 1, 1879. Sales of root beer as a

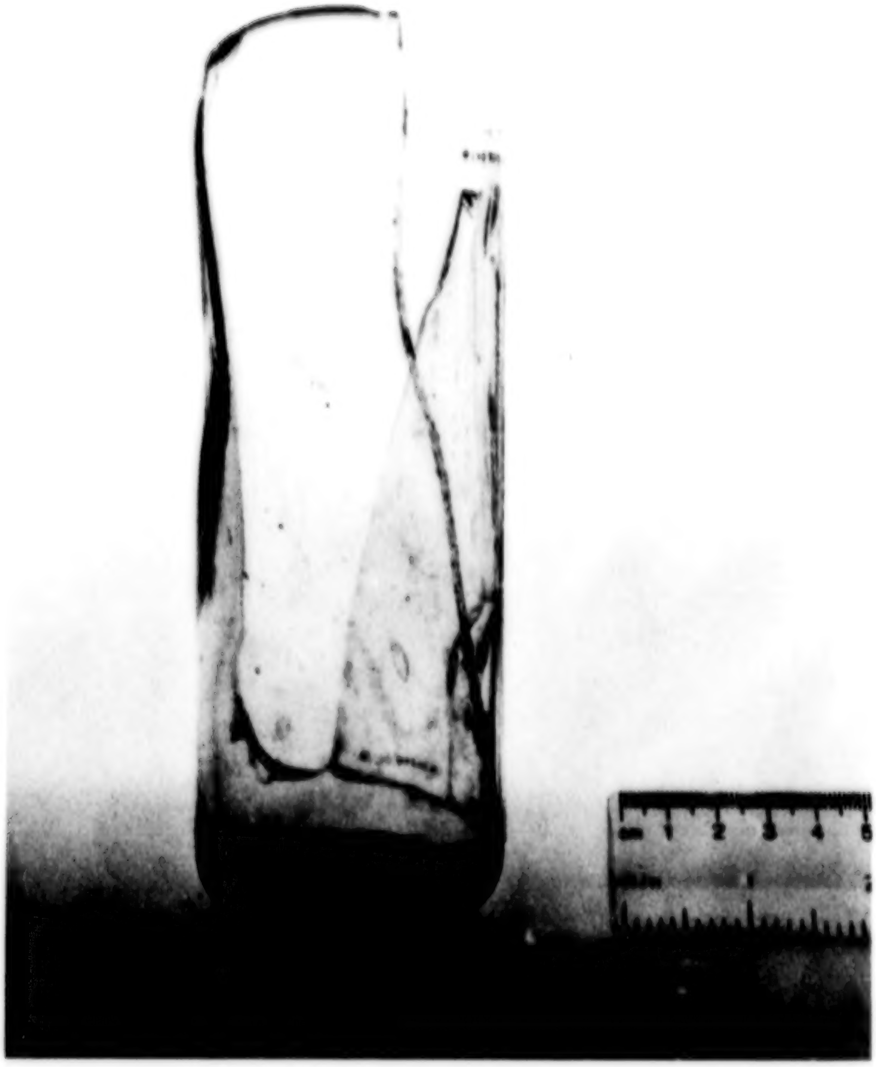

Figure 5.19: Partial Hires soda water bottle from unit 25-B.H.L2

carbonated drink began to replace root beer concentrate around 1900 (Herskovitz 1978:5). It is likely that this crown finished bottle once held carbonated root beer for a concentrate bottle would have had a screw top or another type of easily resealable finish like a cork.

Closures: Most of the olive green bottle finish fragments and some of the brown items retain a sticky whitish gray residue from their foil seal closures. In most cases, heavy rust stains from the wire bale used to hold the cork in place are also present immediately below the applied finish.

Several ferrous crown caps and metal cap fragments were found in the lower (pre-1900s) levels. Crown caps are a simple metal cap lined with cork or plastic that can be crimped down over the grooved crown bottle finish. The crown caps found in the Gold Rush period deposits are badly corroded and fragmentary, their cork linings encrusted with rust and deteriorated metal. Early ferrous crown caps contain a thin slice of paperbacked, natural cork as a liner (Leif 1965:18-19).

Two external screw, deep, continuous thread, white-metal bottle caps measuring about 1 inch in external diameter were found in the lower levels of Gold Rush period strata (Figure 5.20). A narrow ribbed band, designed to aid in removal of the cap, runs around its outside perimeter. The embossed numerals "60" appear on the interior of one of the lids. From the appearance and weight of the caps, it is likely that they are a nickel-plated lead or a lead alloy. Several of the pocket flasks shown in a circa 1903 Illinois Glass catalog have similar lids (Putnam 1965:164-168).

Period general merchandise catalogs also show flat silver pocket flasks with screw lids. The "Cork Lined and Plated Metal Screw Caps" from "Flint Flasks" shown in a period catalog are very similar to the artifacts from the Gold Rush dump (Freeman 1964:n.p., reproduction of page 329 of the Hagerty Brothers & Company catalog; catalog section follows page 367 of Freeman's text). Lief, in his discussion of bottle closures (1965:9), says that "metal screw caps made their appearance on,

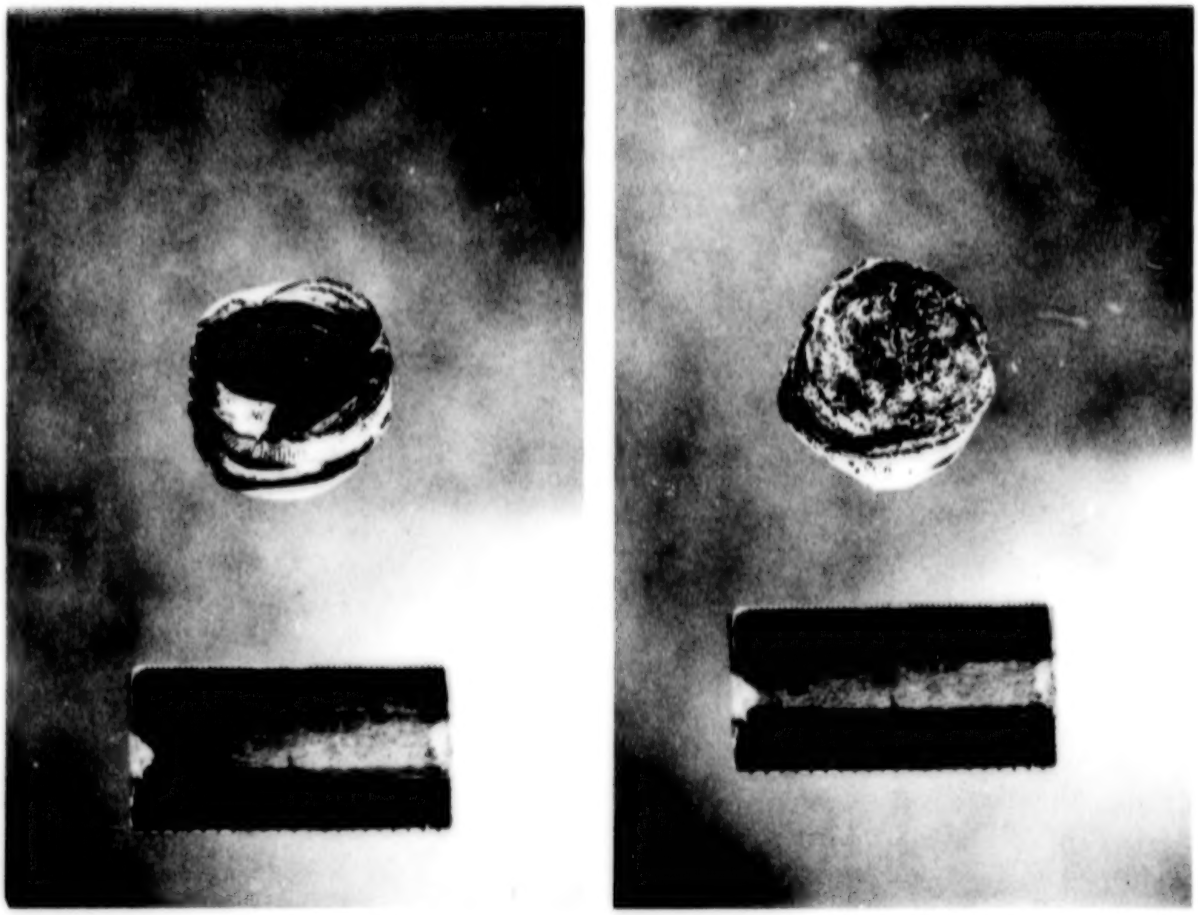

Figure 5.20: Interior and exterior views of white metal screw top bottle caps.

among others, specialty bottles such as odd-shaped pocket flasks." It is probable that these caps are all that remain of a pocket flask.

Also found in the Gold Rush period deposits was a white metal-covered cork stopper (Figure 5.21). The cork is broken away at cap level. The edges and rim of the stopper are ridged as if the metal had been crimped around the cork. In the center of the embossed metal top is a spread eagle holding a branch; surrounding it are the words "G.H. MUMM 7 CO Gde BARY." A single line of fine embossed dots encircles the eagle and the caption. Below the caption and the dots are the words ". . . S S PROTECTIO. . . ." The eagle and the lettering appear to have been coated with blue enameling. This stopper was probably used by G.H. Mumm & Company, of Reims, France (Compu-Mark 1985:2509). The House of Mumm, originally a German company prior to its establishment in France, was first organized in 1827 and still produces fine champagnes today. Their trademark for this design, number 9,837, was registered November 21, 1882 (Herst 1987).

Several corks were recovered from the Peniel excavations. Most of these are slightly tapered, averaging 1 inch long and from 15/32 to 5/8 inch in diameter. For over 300 years the common cork has been one of the most popular and durable bottle closures known. Its desirability was largely due to the "unique cellular structure which imparted . . . special characteristics. Many-sided cells with thin, resinous walls trapped air and were not interconnected . . . [making cork] compressible, impenetrable, elastic, and stable" (Lief 1965:6). A straight cork larger than the bottle mouth could be forced into the opening and would expand to fit the tapered neck, serving to make the bottle "airtight, gastight, moisture-proof" (Lief 1965:6).

After the advent of the cork-lined crown cap, the use of cork as a closure dropped sharply. However, cork remains the traditional choice for the more expensive types of wine and champagne; as Berge suggests, "champagne would not be champagne without the customary loud 'pop' when the internal pressure of the wine is released" (1980:46).

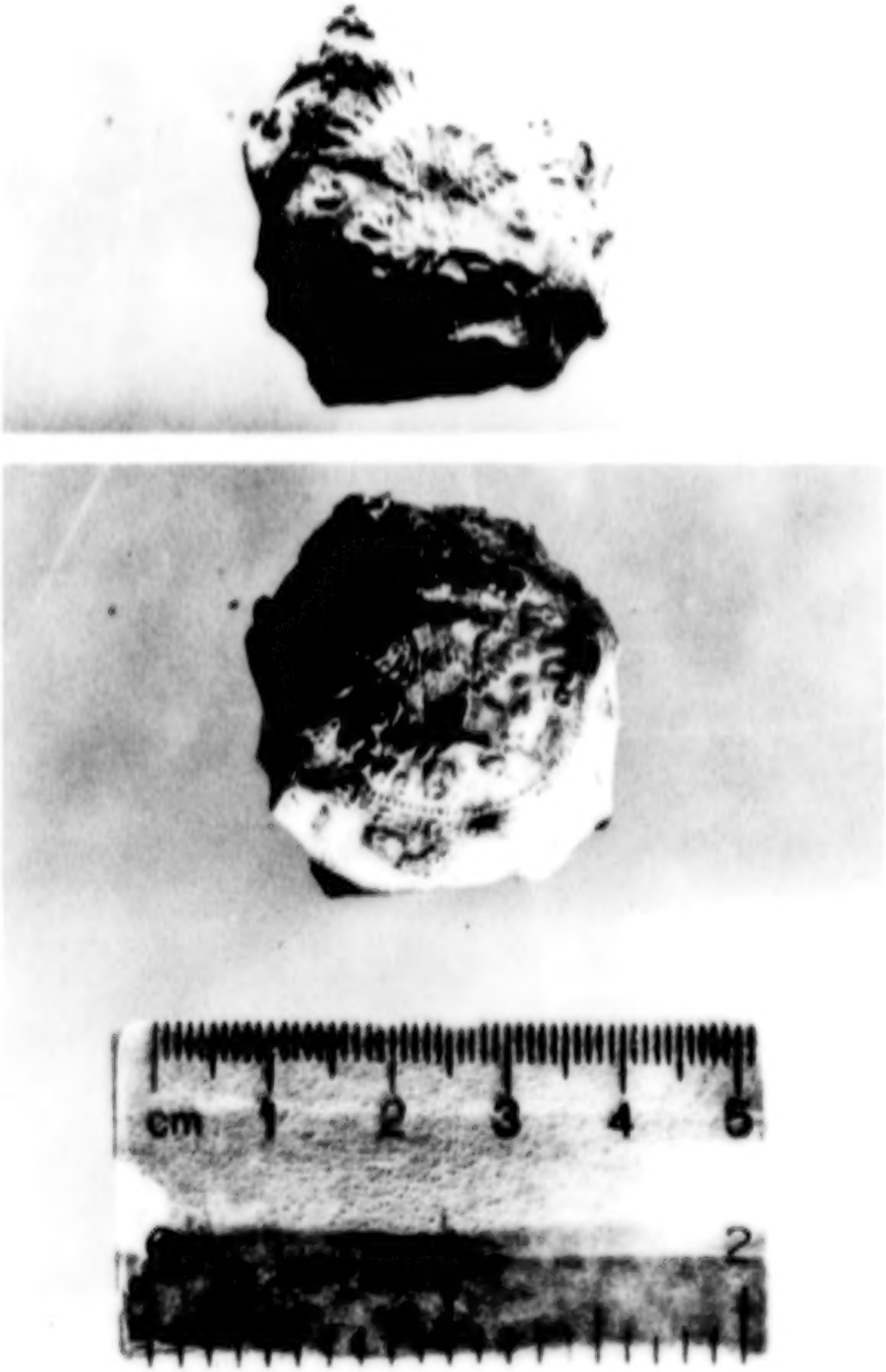

Figure 5.21: Two views of a white metal stopper from the Gold Rush period deposits of excavation unit 25-D.

During the Gold Rush period, residents of Skagway were evidently well supplied with liquor, beer and wine. For example, the Monogram at 511 Broadway advertised:

> We beg to announce to the Families of Skagway that we are prepared to supply them with the finest Imported and Domestic Liquors, WINES AND CIGARS, at REDUCED PRICES For the Holidays. Our enormous stock is now open for inspection. . . A full line of Canadian and Scotch Whiskeys, Hennessy & Martell*** Brandies, Guinness' Stout, Bass' Ale, Belfast Ginger Ale, Burks XXX Irish, Jamaica Rum and other liquors too numerous to mention. Agents for St. Louis and Tacoma Bottled Beer (Daily Alaskan, December 17, 1899:3).

Christmas 1899 was "celebrated as never before in Skagway. Horse sleighs and dog teams crowd the streets and champagne punch and roast turkey goes a-begging" (Daily Alaskan, 1 January 1900:14).

Most beers were available in Skagway. Two breweries, the Skagway Brewing Company and the City Brewery, made their own beer to compete with such imported brands as Rainier Beer from the Seattle Brewing & Malting Company, Red Star Beer, Sound and eastern bottled lager beer, and Bohemian keg beer on draught.

Excavation Unit 25D Disturbed Strata Beverage Storage: The range and type of materials found in these disturbed strata are virtually indistinguishable from those found in adjacent Gold Rush period strata. A whole alcoholic beverage bottle was found in stratum D of unit 25-D (Figure 5.22). This colorless bottle is embossed with the words "PACIFIC CLUB / M & K GOTTSTEIN / SEATTLE, WASH." inside an embossed circle. Gottstein's Pacific Club "OK" bourbon was produced during the 1890s (Wilson and Wilson 1968:114). Herst (1987) indicates this particular Pacific Club design was used from 1889-1895.

A partially reconstructed brown bottle from this strata bears the embossed inscription: "DAVY CROCKETT PURE OLD BOURBON HEY, GRAUERHOLZ 7 CO. S.F. SOLE AGENTS" (Figure 5.23). According to

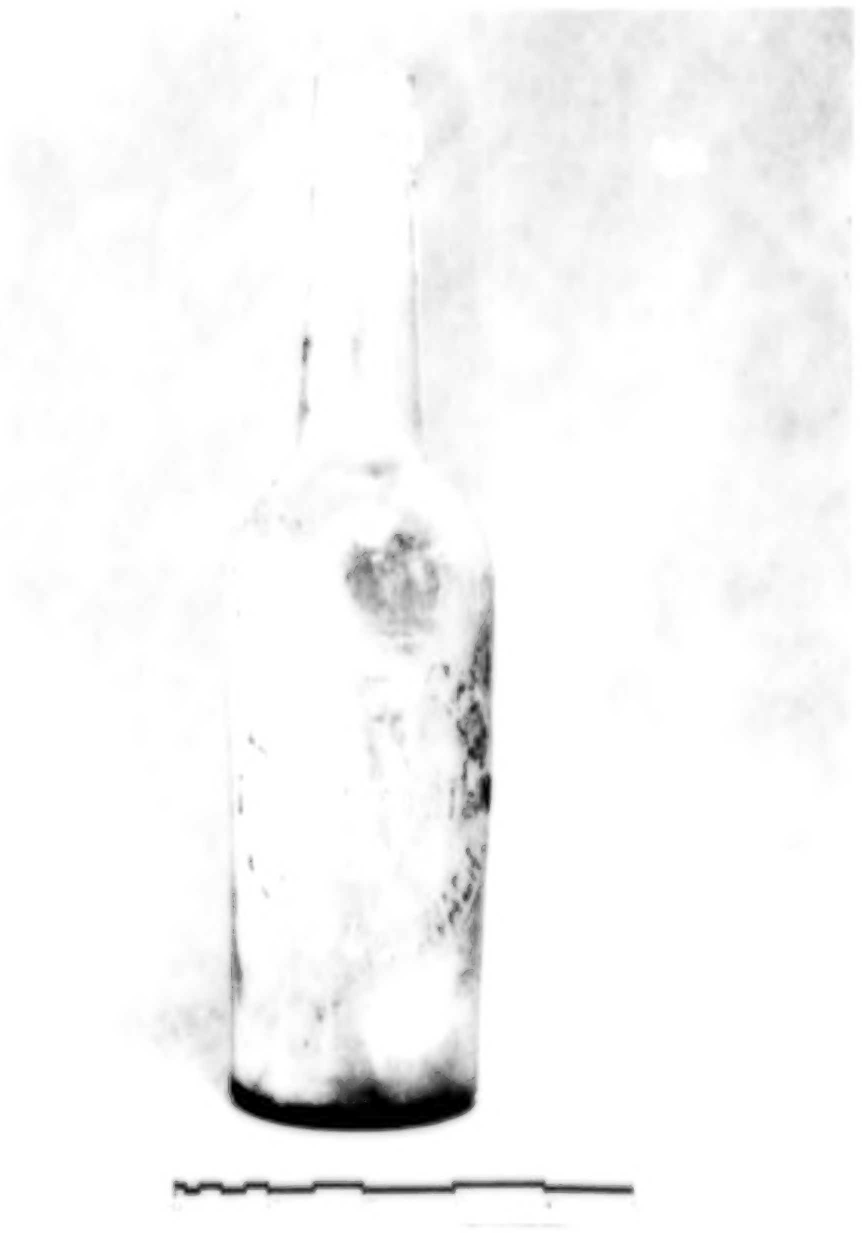

Figure 5.22: Colorless glass Pacific Club bourbon bottle from excavation unit 25-D.D.

collectors Bill and Betty Wilson (1968:59), distributors John Hey and Henry J. Grauerholz operated in San Francisco from 1887 until 1905. The Wilsons suggest that:

> The Davy Crockett name evidently was as popular then as today. It's [sic] identification with the state of Kentucky was quite synonymous and the brand was distributed in many areas of the west. . . . Though slow in starting the brand grew in popularity until the earthquake [1906]. Grauerholz didn't survive in business afterwards (1968:59, 60, 74).

However, Herst (1987) indicates that this brand name was made by Betterton & Co. of Knoxville, Tennessee, trademark 16,790 registered July 9, 1889 and used since March 3, 1988.

The phrase "Sole Agents" suggests that the firm of Hey and Grauerholz was the only company in the San Francisco area approved to distribute this brand of whiskey (Ferraro and Ferraro 1966:56).

Several amber glass body sherds found in this stratum are embossed with a crown and a curvilinear design, and the letters: "VAN S." This liquor bottle was probably distributed by W.J. Van Schuyver & Company, Portland, Oregon between 1870 and 1915 (Wilson and Wilson 1968:144-145).

Two items which appear to be from the same bottle have a curvilinear logo and the letters "AN and [Bre]WING." The first set of letters, which may have been part of the words [S]an" or "[Fr]an[cisco]," are general terms likely to be found on a number of different bottle types; visible parts of the logo could also belong to any one of several bottlers. These sherds mend with items from stratum E of this unit to complete the word "Brewing." Other embossed brown and amber base and body sherds found in stratum D are also too small for identification of the maker or place of origin.

An olive green bottle lip finish found in this stratum has a double bead finish above a "swirled" neck. The interior of the neck is also

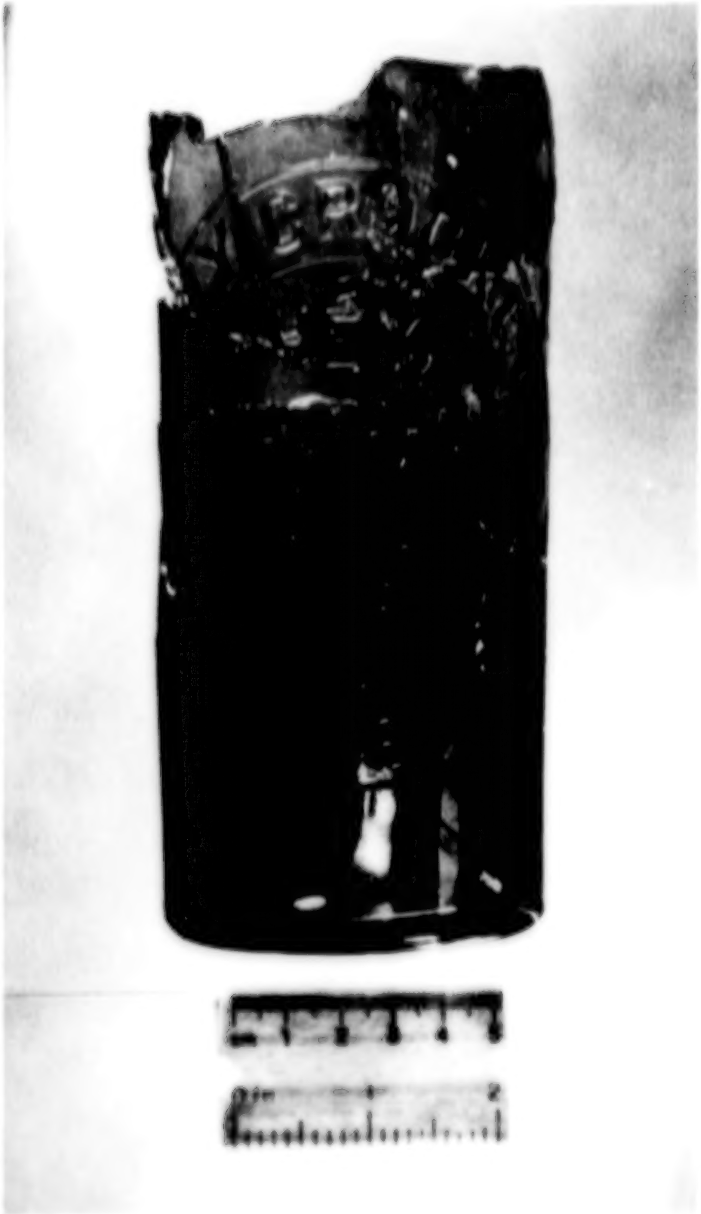

Figure 5.23: Partially reconstructed Davy Crockett Bourbon bottle from excavation unit 25-D.D.

slightly roughened. Putnam (1965:133, 151, 158) shows several squat brandy bottles with a similar neck and brandy finishes; the sloe gin bottle in "imported color" has this finish without the twisted neck. This bottle finish may also have come from a decorative flask or from a liquor bottle such as the "Alabama Square, Squat Round Twist Neck Brandy, Buckeye Bitters, etc. (Putnam 1965:149-169). No doubt this twisted neck bottle once held some sort of alcoholic beverage.

A number of brown sherds come from bottle[s] with long, gently tapered necks. Several of these sherds have a tall brandy with bead (ring) finish; the others a brandy finish (Figure 5.15e and f). Several olive green bottle finish sherds from unit 25-D.D have a gently rounded, laid-on collar at the top of the bottle (Figure 5.15h). Several examples of this sort of finish are shown in Wilson and Wilson (1968:170 et seq.) and Putnam (1965:252; mould no. 14, "Quart Champaigne Beer"). Identical but narrower laid-on collar or fine blob finishes are also illustrated in these publications. Wilson (1981:3) shows the narrower finish on a lager style beer bottle.

While a variety of bottles and closures were developed for this effervescent liquor,

> beer bottles . . . commonly have a broad, rounded, or flat finish, often sloped, to which wire could be anchored to hold the cork in place (Wilson 1981:xv).

During this time period, two bottle styles were common in the western United States--the export and lager style. The lager style bottle resembles a small version of a wine/champagne bottle, but the finish is rounded to provide a smooth lip for drinking directly from the bottle (Figure 5.15i). The export style was "designed to withstand [the] high temperature[s] and pressure" involved in pasturization and bottling (Clint 1976:48). The finish used on the export style was often a single smooth, rounded collar, but in some cases a narrow bead or ring was added just below the collar. In either case, the bottle was fairly slender and cylindrical with sloping shoulders (Putnam 1965:250-261). Several examples of these styles, with a laid-on, tooled finish, were found in unit 25-D.

A brown bottle base sherd from stratum D of unit 25-D has the letters "W F & S MIL" embossed around the outside of a 4-pointed star. A "ghost" image of the star and lettering is visible above and to the left of the original. Several other base sherds from the same strata have parts of this embossment. These bases appear to have been blown into a post mold. These initials have been identified as the mark of William Franzen, who took over the Northern Glass Company in 1896, changing its name to "Wm. Franzen & Son" ("W F & S Milw") 1896 to 1929. Bottled by Franzen, Milwaukee beers were distributed throughout the west until the 1920s (Toulouse 1971:152; Noyes 1962:6-7).

In a report on the Simpson Springs Station in Utah, Berge (1980:93-95) described a similarly marked bottle as a champagne beer container. The crown finished, green bottle illustrated in his report has a cylindrical body, tapered neck, and a round border base produced in a cup-bottom mold (Berge 1980:93, 140-141).

Bottles bearing this same set and arrangement of letters around a centered number "9" were found at the last Fort Union, New Mexico (Wilson 1981:124).

Other brown bottle base sherds from this level/unit have "S B & C[o.]" embossed across the center. One base was formed in a cup-bottomed mold, and the other in a post bottomed mold. This mark belongs to the Streator Bottle & Glass Company, Streator, Illinois (Toulouse 1971:461). The Streator Company, in operation from 1881 to 1905, counted beer magnate Adolphus Busch as one of its founding stockholders. Similar bases are illustrated in Rex Wilson's Bottles on the Western Frontier (1981:124).

A variety of miscellaneous brown bases and base fragments from stratum D include both post mold and cup-bottom types. These are too small, however, to determine probable original contents.

A whole aqua glass soda water bottle and fragments of several other identical items were found in stratum D of excavation unit 25-D (Figure 5.24). These machine-made bottles have a crown finish, and the side seams extend to the top of the bottle where horizontal seams can be seen at the top of the lip and just below the crown finish. Vertical "ghost" side seams are visible on two of the items (Miller and Sullivan 1981:21-22). The base, embossed with numerals, was formed in a post bottom mold. (Three of the bottles have the number "122" on the base; the others have "249" and 28". Although well made, the bottles are uneven, with a wide variation in basal thickness from one side of the bottle to the other, and they have numerous bubbles and stretch marks.

The combination of the finish and seam patterns, and the post-molded base suggests these bottles were made in a "blow-and-blow" semi-automatic machine. Blow-and-blow operations were generally used in the making of narrow mouth wares (Toulouse 1969a:586). Basically, the process involved initial use of a "blank" in a hinged, two-piece mold. A glob of glass was placed in the mold where the neck and bottle finish were shaped first, and then the body of the bottle was partially blown. This unfinished parison or glass blank was then transferred to a finishing, or blow mold where the bottle was blown again, with its final shape (Miller and Sullivan 1981:20). The ghost seams represent the traces of the original blank mold left after the bottle has been blown a second time into the finishing mold.

Two patents for semi-automatic bottle-making machines were issued during the 1880s. In 1881, American Philip Arbogast's invention "established the principle of using a parison and a blow mould in a press-and-blow method which formed wide-mouthed containers" (Miller and Sullivan 1981:3). Englishman Howard Ashley developed a "blow-and-blow process with a parison and full-sized mould to produce small-shouthed

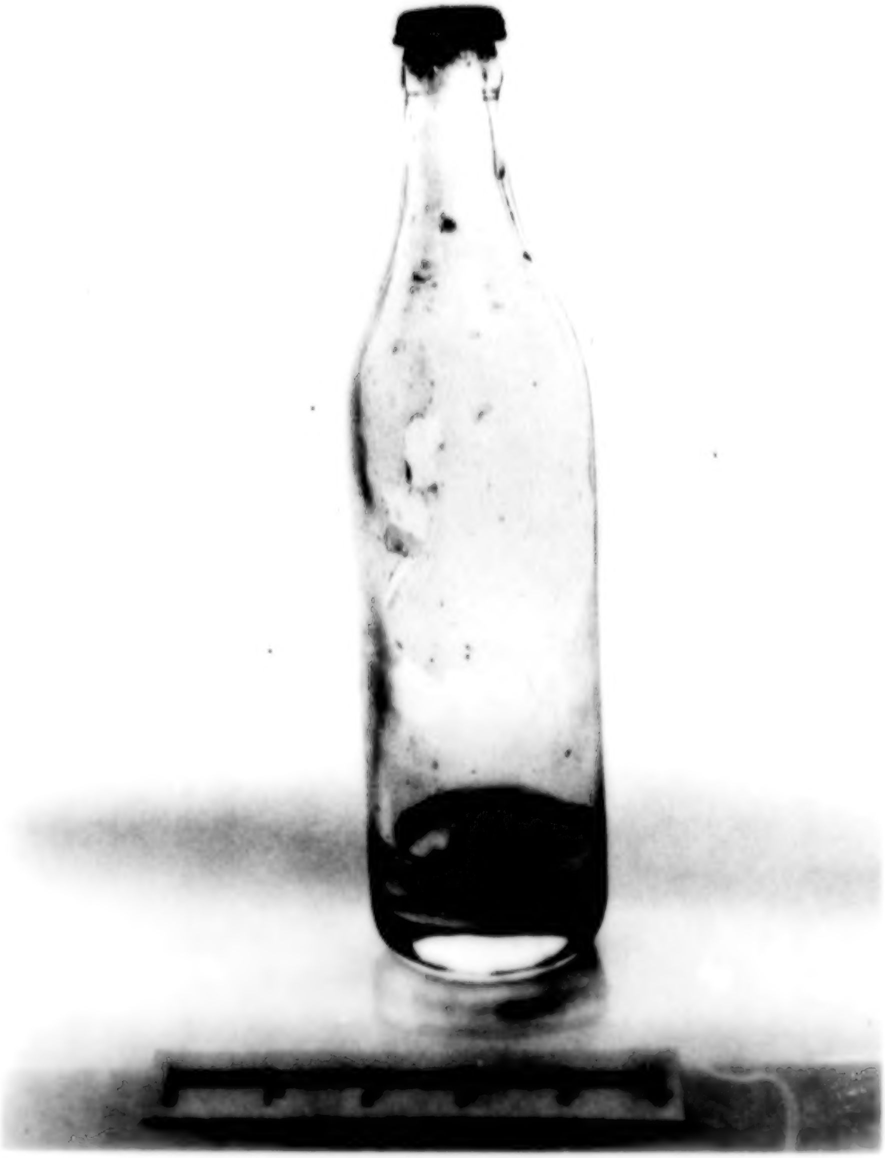

Figure 5.24: Aqua glass soda water bottle from excavation unit 25-D.D

containers . . ." (Ibid.). It was not long before other similar machines were under development.

The production of narrow mouthed containers on Ashley's semi-automatic machines began in 1889. Within ten years, containers were being mass produced by this process. The use of semi-automatic machines to produce narrow mouth containers peaked around 1917; by 1926 new technologies had fairly well eliminated use of this production method (Miller and Sullivan 1981:16).

It should be noted that both automatic and semi-automatic bottle-making machines "can produce the same types of objects, probably with similar evidence of manufacture. Both form the container's finish portion first, using a separate ring mould" (Jones and Sullivan 1985:35).

Three light green sherds from stratum D mend to form a partial soda water bottle (Figure 5.25). This exceptionally heavy glass bottle has a perfectly cylindrical body, and a round egg-shaped base with a small (3/4 inch diameter by 1/4 inch deep) concave area in the center. Most of the concave area, which was possibly from a pontil, is broken away. The embossed letters read: ". . . CHS / . . . FAST." No maker was found for this item, but "FAST" may be the last half of the word "Belfast." According to Herskovitz, the round-bottomed Ross's Belfast bottles found at Fort Bowie once contained soda water, and were imported from Ireland (1978:5; see also Ferraro and Ferraro 1964:36 and Tibbitts 1964:41). The term "Belfast", used by these authors to refer to a soda water of Irish extraction, appears also to have been used generically for a type of ginger ale produced in the United States. A receipe for "Belfast Ginger-Ale" using "Tufts' Solid Belfast Ginger-Ale Extract, Best Granulated Sugar," and "Warm Water" is given in an 1885 manual on the manufacture and bottling of Carbonated Beverages written by James W. Tufts. Tufts advised manufacturers to "not even imitate imported ginger-ale. American made ginger is superior to the imported" (Tufts 1969:3-4). A listing of pop bottles by collector John Tibbitts (1963:33-34) includes items from the Belfast Ginger Ale Company in San

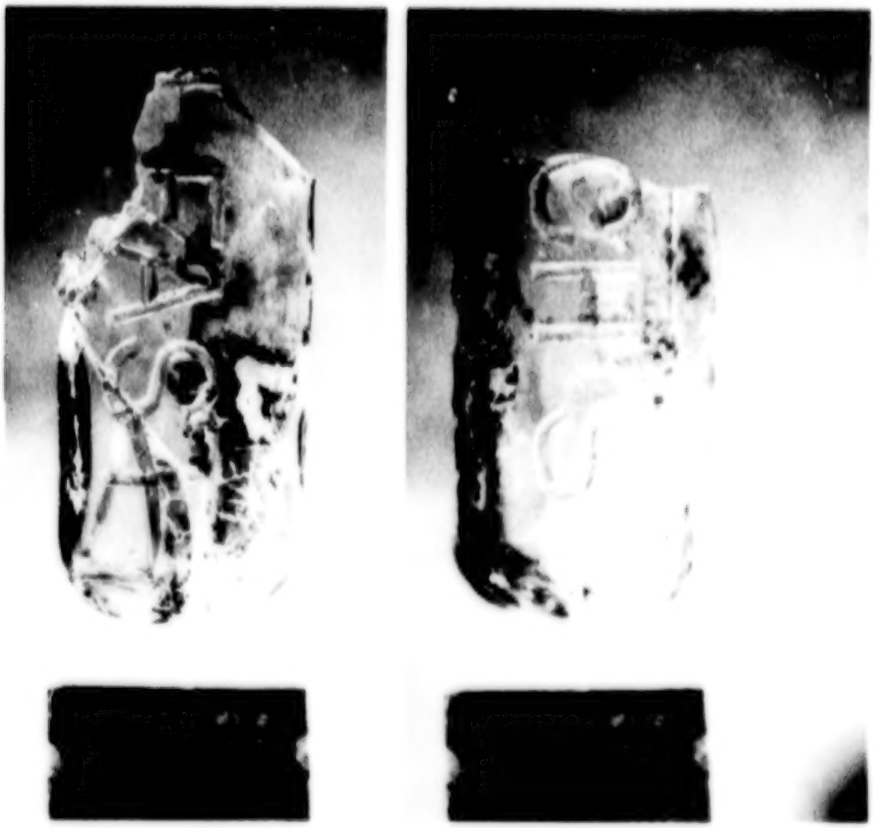

Figure 5.25: Two views of a partially reconstructed light green glass round-bottomed soda water bottle from unit 25-D.

Francisco as well as the round-bottomed Ross's Belfast. The Monogram at 511 Broadway advertised "Belfast Ginger Ale" (Daily Alaskan, 17 December 1899:3).

Closures for soda water bottles were a real problem. If not fastened tightly in place with wire, the ubiquituous cork used on early soda water bottles often dried out, allowing the closure to be blown off or the gas to escape. This resulted, at best, in "flat" soda. The "torpedo" bottomed soda water bottle was invented by an Englishman named William Hamilton to provide a solution to this problem (Stewart and Cosentino 1976:76-77). That is, because a round-bottomed bottle was unable to stand upright, the bottle had to be laid on its side, and the liquid kept the cork moist, helping to preserve the seal. Torpedo bottles imported into the United States most often contained English Ginger Ale (Stewart and Cosentino 1976:76-77).

Another continuous thread white metal cap was found in the mixed context of stratum D, Unit 25-D. This closure has a cork liner, and the same ribbed exterior band as those from the Gold Rush period deposits. No numbers are visible inside the cap.

An intact white metal closure, a continuous wide-thread stopper intended for an inside screw threaded bottle was found in the upper levels of excavation unit 25-D (Figure 5.26). The outside edge of the approximately 5/8-inch diameter stopper is ribbed for easier opening. The top of the stopper is embossed with the words: "KELLOGG'S . BOURBONS ." around a centered curvilinear design containing the letters "C" and "O". This same design and the embossed words: "C.W. KELLOGG COMPANY SAN FRANCISCO" were used on the front panel of amber whiskey bottles produced circa 1897-1898 by Kellogg (Wilson and Wilson 1968:90-91). The Calvin W. Kellogg Wilmerding-Loewe Company in San Francisco distributed Kellogg's whiskey from about 1895 to 1917, and collectors have dated several brown, embossed Kellogg's bottles with large applied inside screw tops to between circa 1900 and 1917 (Wilson and Wilson 1968:151-153).

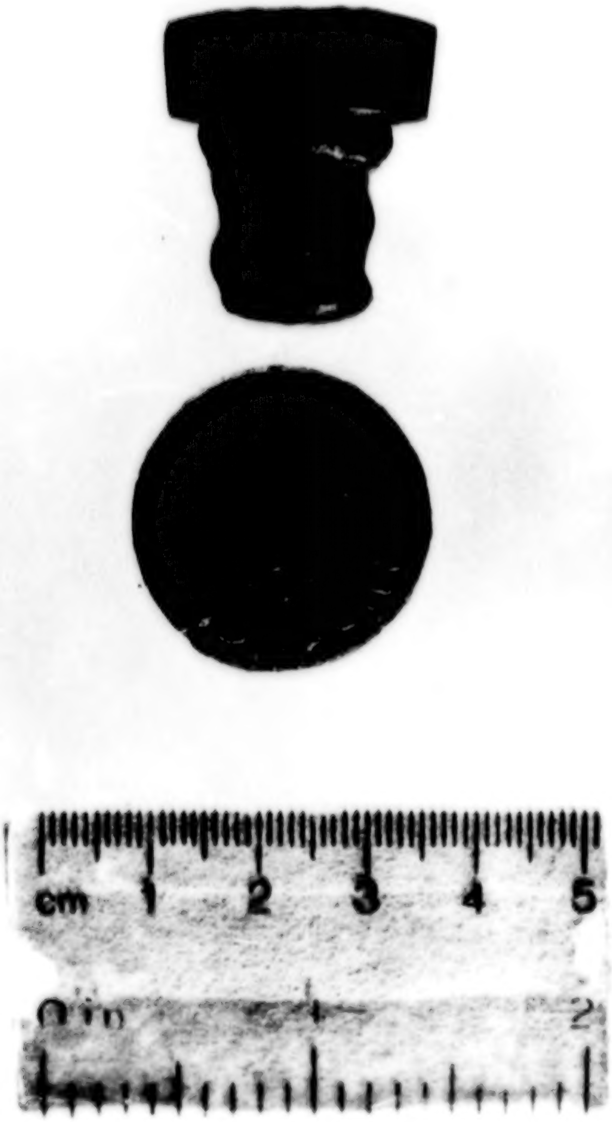

Figure 5.26: Two views of a white metal Kellogg's bourbon bottle stopper from the upper levels of excavation unit 25-D.

Several lead seals were found in this unit and level. One of these has embossed, painted blue letters inside a fine raised dotted line, parallel to the perimeter of the lip top. These letters surround what appears to be an eagle wing. On one side the letters read: ARY; on the other & C$^{\underline{o}}$. This item appears to be identical to the "Mumm" bottle seal recovered from stratum E of this unit. Another item is impressed with the letters & MI and C (?) above a fold-over seam. The source of this seal is unknown.

Post-1900 Beverage Storage: One small sherd of a brown bottle base found in the upper levels of excavation unit 25-A may have come from a "flat whiskey" bottle (i.e. one with rectangular body and a straight cylindrical neck). This bottle was produced in a cup-bottomed mold.

The bright green glass sherds from the Peniel Mission excavations probably post-date 1920 with the mass production of colored glass (Ward, et al. 1977: 240). Part of an embossed logo is visible on a bright green base sherd from the post-1900 levels of excavation unit 25-A. The "V" shaped embossment, part of a larger design, could have belonged to any of several twentieth century glassmakers (e.g. Diamond Glass Company, Pennsylvania; Glass Containers Corporation, California; Star City Glass Company, Indiana, etc.) Toulouse 1971:601-603; Berge 1980:83).

A number of body and base sherds found in the test excavations are embossed with a few isolated letters or portions of maker's marks that can not be identified. One brown body sherd found in the post-1900 strata of unit 25-A bears the initials "S F." These initials may be part of a logo from the post-1890 San Francisco Glass Works, the San Francisco & Pacific Glass Works (1876-1902), or less likely, for the Streator Flint Glass Works (1890-1898), Streator, Illinois (Toulouse 1971:468-472). The embossed letters may also be an indication of the city of origin, San Francisco.

Another embossed item, an olive green sherd from the upper levels of unit A, bears the capital letters "GB" on one side. It is likely that this is only a portion of the total inscription, and a search of the literature did not locate any similar marks. There are a number of bottlers and distributors whose initials might contain this combination of letters (Wilson and Wilson 1968:34).

Numerous fragments of brown glass bottle bases were found in the post-1900 Peniel excavations. While some sherds are too small to determine the type of mold used in their manufacture, several were evidently made in a turn mold, which obliterated any mold seams and left the characteristic horizontal striations on the body and base. A few olive green base sherds found in this portion of the excavation also were obviously from bottles produced in a turn mold, but they lack the deep kick-up common to wine/champagne bottles. It is assumed that these bottles may have held liquor of some variety.

One embossed colorless glass sherd from unit 25-D is included in the Beverage Class. This flat sherd reads "ROGER & GALLET" above a curvilinear motif with a stylized "B" in its center. A directory of trademarks lists two French vintners under Roger and Gallet--Jean Marie Farina Roger & Gallet and L. Homme Roger & Gallet, both of Paris (Compu-Mark 1985:2677).

A "black" glass sherd, embossed with the letter "O" or "D", was recovered from the upper levels of unit B. This sherd may have come from a bitters or schnapps bottle. After the turn of the century, bitters fell into disfavor, and other beverages caught the fancy of the drinking public. Passage of the Pure Food and Drug Law of 1906 and the subsequent prosecution of unscrupulous advertisers significantly reduced the demand for bitters. Briefly revived during Prohibition, the production of bitters soon diminished and there are relatively few brands on the market today.

Several crown caps were found in the post-1900 strata. They were too decomposed to tell whether the liners were of a slice of cork or compressed particle cork. After 1909, compressed particle cork punched or extruded into discs was used as a liner, replacing the high quality sliced cork used earlier (Lief 1965:25). The recovered crown caps were all the "long skirt" variety, about 8/32 of an inch high, indicating the caps pre-date circa 1954. Plastisol liners for crown caps were introduced in about 1954. The plastic liner was thinner than cork, allowing bottlers to reduce the gauge of the metal in the cap. This new development shortened the cap to about 7/32 of an inch, saving manufacturers materials and money.[4] The shortened cap would still fit on both standard and short-skirt crown finishes (Lief 1965:40).

It appears that the majority of the crown finishes were shaped with a lipping tool before the hot glass bottle hardened. On a few items, the finish was laid-on separately, and the lip and upper neck shaped with a lipping tool. Once the Owens automatic bottling machine began to produce bottles of uniform shapes and lip sizes, the simple, efficient, disposable crown closure could be adopted by the nation's bottlers.

Several olive green glass wine/champagne bottle finishes were found in the upper levels of the excavation units and test holes.

A slightly crumpled, round lead foil seal with "VALENTINE CO NY" stamped on the face was found in the post-1900 levels of the test trench during the 1983 testing (Figure 5.27). The product and maker are unknown.

A ferrous crown cap with an eagle emblem and the words "Budweiser TWIST OFF OR USE OPENER" in red on the top was found in the Operation 21 test trench. This short-skirted cap is lined with yellow

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[4] In his 1965 publication, Leif (page 40) states that the change in the crown cap was the "first in 63 years of crown capping. . . ." Adding 63 years to 1891, the date of Painter's crown cap patent, gives us 1954 for the probable date of the new variety of cap. However, Ward et al. (1977:239), list 1955 as the date of introduction for the plastic liner, and 1956 for the short-skirted cap.

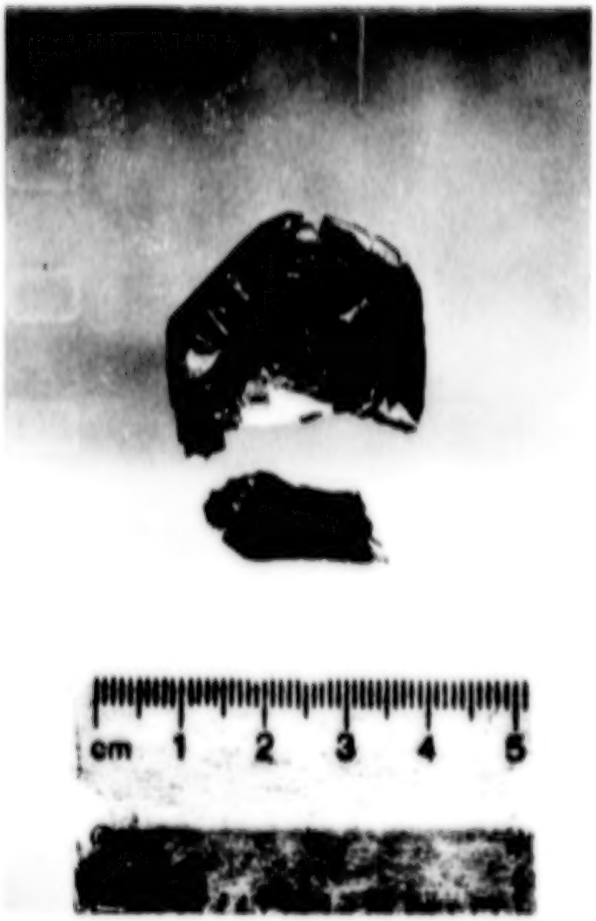


Figure 5.27: Valentine Company lead bottle seal

metal, and fitted with narrow plastisol ring around the inside perimeter. It post-dates 1954 or 1955 (Lief 1965:40).

Shovel Tests Beverage Storage: A brown glass bottle finish fragment from the shovel tests has a laid-on oil collar (Figure 5.15e). According to Berge (1980:57), oil finishes were "common on castor oil, liquor, and beer bottles," and were also used on some soda pop bottles. The oil finish used on beer and liquor bottles tended to be larger than those found on the food bottles.

Level 6 of Shovel test 29-A produced a brown glass body sherd embossed with the letters "IDE" above an "R." This container may have contained some sort of alcoholic beverage, but the piece is too small to identify the source.

Like most of the wine/champagne bottle fragments found in the Gold Rush period deposits, items from the lower levels of the shovel tests retain some of the sticky grey adhesive from the lead bottle seal. In two instances, portions of the wire bail remain.

FOOD STORAGE CLASS

All sorts of food storage containers are represented in the Food Storage Class which totals 11,745 artifacts (Appendix A.2, Table 5.12). Whole or partially restored items include canning jars, milk bottles, condiment bottles (pickle and olive jars, sauce bottles, jelly and preserve jars, marmalade jars), as well as a variety of closures. Non-diagnostic sherds of clear, amethyst, and aqua glass make up the major proportion of the glass artifacts, but a few isolated sherds of green and light blue glass are also included in this category, along with occasional ceramic and plastic artifacts.

Fifteen hundred and forty eight aqua glass sherds were recovered from the Peniel Mission excavations. These sherds accounted for 45% of the total food storage glass. Between 1880 and 1910, aqua (aquamarine) colored glass was used for many different types of bottles and jars (Ward et al. 1977:240). It is obvious that a few of the aqua glass bottles held patent medicines, ink, and other household products. Where identifiable, these aqua-colored household product containers were included in the Pharmaceutical and Furnishing Classes.

Sherds from aqua class canning (fruit) jars make up one of the largest categories of identifiable glass food containers. For centuries pickling, drying, and salting had been used to preserve foodstuffs, but it was the mid- to late-1800s before foods could be successfully canned at home. This revolution in home food preparation began in 1858 with the invention and patenting of the zinc-capped canning jar by John L. Mason (Figure 5.15b)). By the 1880s Mason had sold all his patents, but his name had become a generic term for canning jars, with 40 or 50 manufactures making inexpensive "Mason" jars (Toulouse 1969b:346).

Early Mason jars had a ground rim, a continuous threaded lip, and a straight, flat shoulder upon which the jar lid sealed. (It was nearly impossible to maintain an air tight seal between the closure and the unevenly ground lip.) Later inventors patented top seals which fit

Table 5.12: Summary of food storage artifacts

FOOD STORAGE CLASS										
		FILL	GOLD	MIXED	POST	STS	STS	F202	U25-D	
			RUSH		1900	1983	1985	& 204	DIST.	TOTAL
Type	Description									
bottle, whole	condiment, colorless, screw top				1					1
bottle/jar, fgs.	canning jar, amethyst		1							1
	canning jar, aqua		51	1	3		1			56
	canning jar, colorless		6			6			3	15
	condiment, amber						19			19
	condiment, aqua		37							37
	condiment, colorless		46		6		1		1	54
	extract, colorless		19							19
	jelly jar, colorless		13		1					14
	marmalade, ceramic		40							40
	milk bottle, colorless & amethyst		2						5	7
	pickle jar, colorless								2	2
	preserve jar, colorless		8						1	9
										0
bottle base fgs.	amethyst		2		1				4	7
	aqua		23						26	49
	colorless		25	1	5				12	43
	light blue								1	1
	light green		1						8	9
										0
bottle finish fgs.	amethyst	1								1
	aqua		9		1				3	13
	colorless		22	1	3		1		5	32
	light green		1							1
										0
bottle body fgs.	amethyst	6	4	6	8		6	1	9	40
	aqua	36	747	15	93	3	61		438	1393
	colorless	89	902	46	196	24	79	2	192	1530
	light green		2	1	2				81	86
										0
cans & key strip	ferrous	144	5428	49	228	162	679	10	1474	8174
closures										0
& canning access.	lids, bail, cork	1	16	2	3	1			5	28
container	plastic	3								3
wrappings	foil, cellophane, plastic	26			25	8	2			61
										0
TOTAL		306	7405	122	576	204	849	13	2270	11745

against the ground lip and/or a sealing ledge which surrounded the lip (Toulouse 1969b:393-394). Several of these seals used "an inverted-cup glass lid which straddled the ground lip, and a screw-band or some other means" of sealing the vessel (Toulouse 1969b:394).

During the late 1800s and early 1900s canning jars were often made of aqua glass because the inexpensive, light-colored glass allowed the contents to be seen while providing foodstuffs some protection from light. Judging by the presence of distinctive jar finishes and bases, and by their color intensity, shape, diameter, and thickness, quite a few of the excavated aqua sherds come from canning jars. Many of the recovered sherds are embossed, some with the ubiquitous Mason's [or Mason] Patent, November 30, 1858.

Colorless glass jars and bottles were used for numerous condiments, culinary items, and patent medicines. Characteristic of many of these jars and bottles is the broad necked "packer" finish (Figure 5.15m) (Berge 1980:55). Often these jars were poly-sided or molded with decorative ribbing. A total of 1731 colorless sherds and one whole bottle were recovered from the Peniel Mission excavations. Thus colorless glass comprised about half of the total glass food storage artifacts.

The presence of manganese caused clear glass to change to an *amethyst* or purplish color when exposed to the sun. Manganese was used as a glass clarifying agent between 1880 and 1917, when World War I put a stop to its importation by American glass makers. A total of 45 sherds are amethyst colored, making up only 1% of the total glass food storage items.

Non-diagnostic sherds of light *green* glass are assumed to have contained such culinary products as olive oil, extracts for flavoring, or condiments such as club and steak sauce, pickles, and preserves (Teague and Shenk 1977:118-119).

Various finish types include continuous threaded items (some with a ground rim), oil finish, packer finish, packer with bead finish, extract lip, brandy with bead finish, etc. Figure 5.15 illustrates the morphology and nomenclature used for these different types.

Sherds from a number of closures, particularly canning jar lids, were found in the Peniel Mission excavations. Lids and closures were sold separately from the canning jars so may not have the same commercial marks (Jones and Sullivan 1985:165). In an attempt to improve the canning process, a plethora of different types, ranging from glass-lined zinc screw-on lids to waxed stoppers, were developed during the last half of the nineteenth century. Glass lids, held onto the fruit jar with bails or clamps, were common. Henry Putnam's 1881 lightning fastener was a

> closure with an eccentric lever and a bail or yoke pivoted to it . . . the bail went over a groove in the glass cover and was held on the jar by a neck wire . . . (Lief 1965:13).

Tin can sherds (totalling 8174 items) account for the largest proportion of the Food Storage artifacts (70%), but few were identifiable by function or probable original content.

Gold Rush Food Storage: Aqua sherds from the pre-1900 levels of excavation unit 25-A mend to form a tall, narrow condiment bottle (Figure 5.28). This bottle has a round, slightly uneven base which was formed in a cup-mold. A centrally located "D" depressed into the base probably stands for Davey and Moore, Brimsdown, Middlesex, England. This company exported condiments, pickles, etc. to the American West between about 1870 and 1900 (Toulouse 1971:153). The upper two inches of the bottle neck and finish have traces of a grey, sticky residue from the bottle seal. The neck opening tapers inward slightly from the rim down about 1-3/4 inches where it tapers outward again. The short packer lip was laid-on before shaping with a lipping tool. This process also obliterated traces of the seam on the upper 3/4 inch of the neck. The

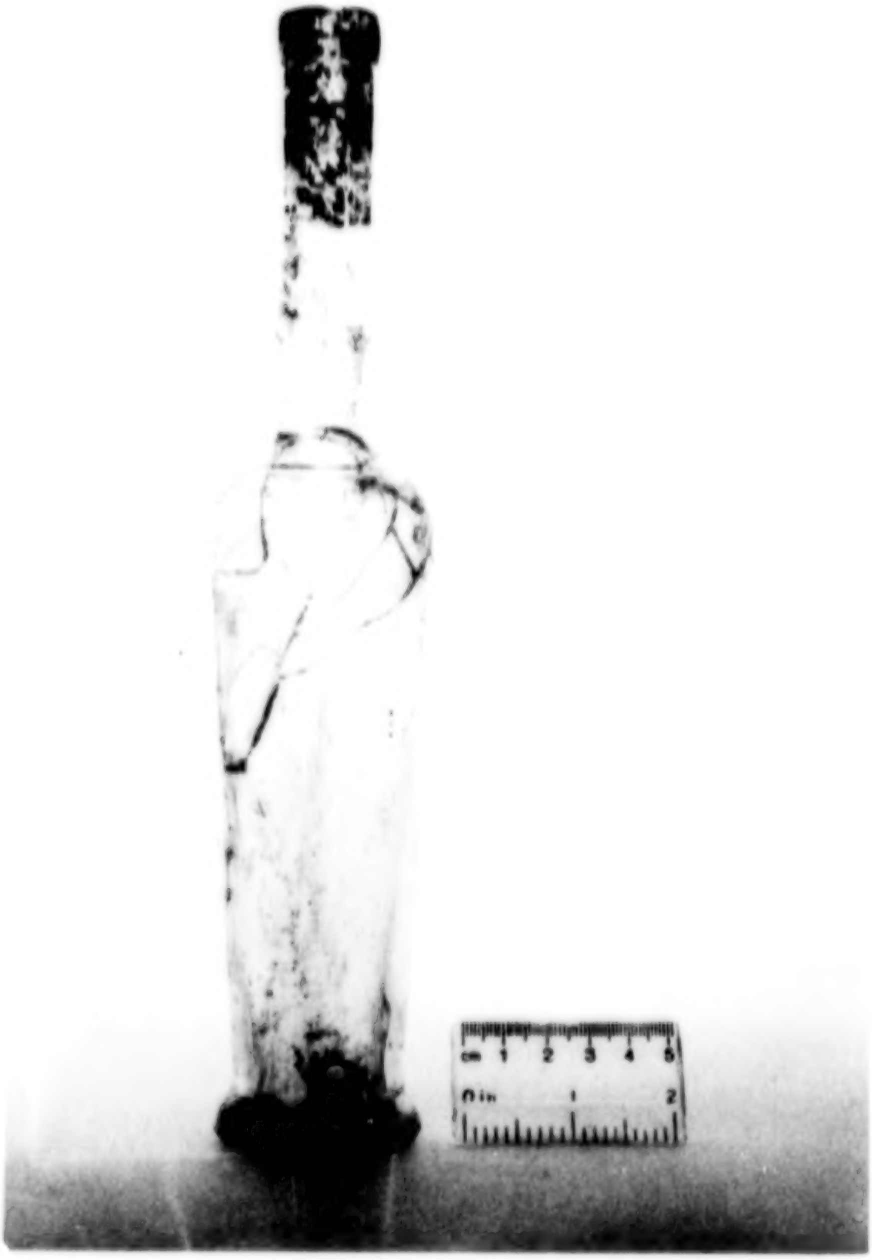


Figure 5.28: Aqua glass olive oil bottle

long, slender neck is somewhat slightly bulbous in shape. An identical item pictured in Putnam (1965:209) is described as a 1/2 pint Bordeaux oil bottle. A similar mark was found on an aqua base recovered from unit 25-D.

A nearly complete Lea & Perrins Worcestershire bottle was reconstructed from aqua glass sherds found in the Operation 21 test trench C (Figure 5.29). This bottle was formed in a two piece mold with a cup mold bottom. Seam lines are visible about half the way up the neck; the bottle has a tooled oil finish. The base is embossed "J4ZD S." Lea & Perrins bottles with the JDS mark on the base date between 1880 and 1900 (Toulouse 1971:277).

Two heavy aqua glass sherds from this same unit mend to form a partial bottle base. The base is embossed with the dipthong letters A_B. This mark stands for the Adolphus Busch Glass Manufacturing Company. According to Toulouse, this manufacturer was in operation at Belleville, Illinois from 1886 to 1907, and at St. Louis, Missouri from 1904 to 1928 (1971:26). Toulouse indicates this mark was used between circa 1904 and 1907. Berge discusses the mark further; it appears to have been used to 1910.

Numerous aqua sherds from canning jars were found in the trash deposits. Most of these wide diameter vessels appear to have sloping, squared shoulders. Three sherds from the Operation 21 test trench B mend to show a partial embossed label from a Ball Mason Jar which reads "(B]all / MASO[N]." This logo was used from about 1895 to 1920 (Toulouse 1969b:31-32).

Embossed inscriptions on other aqua sherds from the test trench read ". . . [MA]SON'S / [P]ATENT [NO]V $^{\underline{30TH}}$ / 1858." Two different aqua sherds from different parts of the test trench each have similar embossed lettering; these both read "[MAS]ON." Copies of the Mason jar were embossed in this manner following the expiration of Mason's first patent.

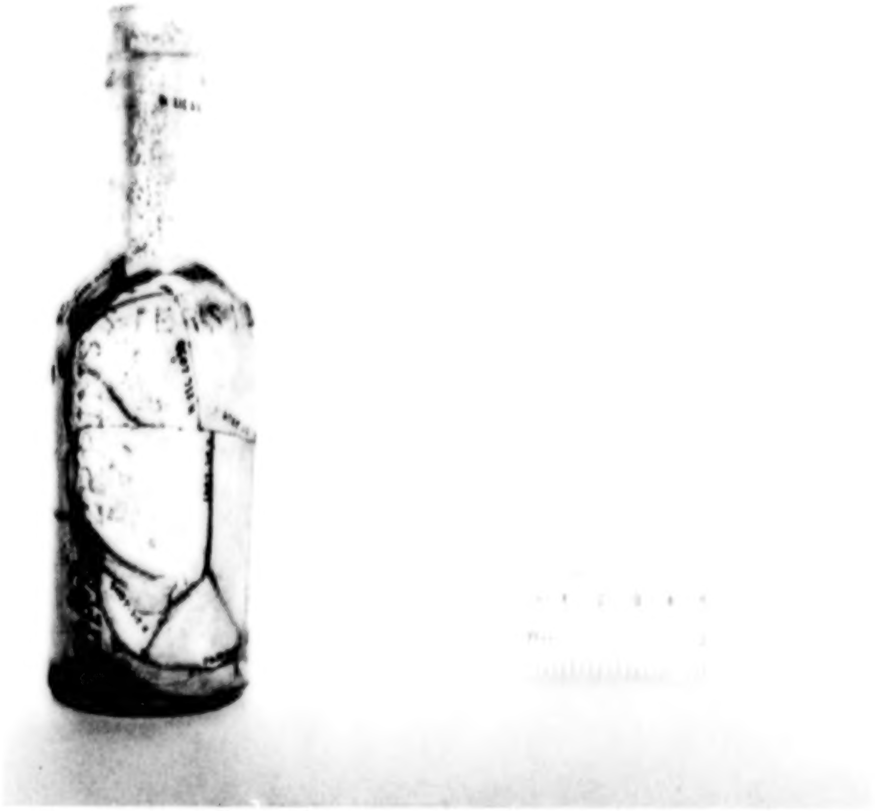


Figure 5.29: Aqua glass Lea & Perrins Worcestershire sauce bottle

Several other aqua sherds from this same area mend to form partial jars. The wide shoulder ledge and abrupt vertical drop from the shoulder to the body are similar to early shoulder seal botles. The top of the lip on the screw thread finish is ground, however, indicating it may also have been used as a sealing surface. It was also common for housewives to grind down the top of the lip (rim) on a shoulder or shoulder ledge/ring seal fruit jar to even out the small nicks acquired during years of use. The ground lip may also have resulted from this sort of activity. The seamline extends to the top of the lip indicating this bottle was either semi-automatic or automatically produced and probably post-dates the 1890s. Most of these appear to be canning jars, but the intermediate size (1-5/15 inch diameter) of the mouth of one item suggests it was probably a condiment or sauce bottle rather than a canning jar.

A number of embossed aqua and colorless glass sherds were found in the trash deposits. Unfortunately, most are too fragmentary to identify more than a letter or two of the embossing. A portion of the word OI[L] was embossed on one aqua body sherd.

A machine-made aqua bottle base showing a basal seam and what appears to be a valve mark was removed from stratum H, level 1, of the north wall of excavation unit B. If this is a post-1903 automatic machine-made bottle, it would indicate the presence of intrusive materials in this level.

Sherds from the base of a colorless 10-sided condiment jar were found in the Operation 21 test trench trench C (Figure 5.30). This bottle was made in a two-piece cup bottom mold. An embossed inscription around the perimeter of the base reads "H.J. HEINZ CO. / PATENTED." In the center of the base, the numerals 79 are embossed within a circle. The fact that the company changed names from J. & J. Heinz Company to H.J. Heinz Company allows us to establish a date range for this item; the H.J. Heinz Company bottles date between 1888-1905 (Herskovitz 1978:23). This bottle, patented March 23, 1893 under design number 22,312, was intended to hold catsup or sauces (Herst 1987).

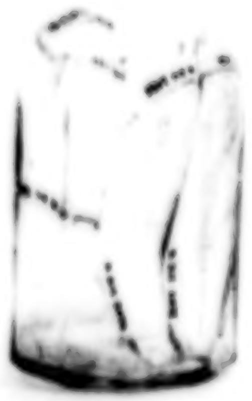


Figure 5.30: Partially reconstructed colorless glass base from ten-sided Heinz condiment bottle

A number of colorless glass sherds molded in an angular pattern were found in Gold Rush strata. Judging from the example above and from contemporary advertisements, many of these are probably from culinary bottles. For example, a number of angular, polysided bottles for catsups and pickle and preserve ware are shown in the 1903 Illinois Glass Company catalog (Putnam 1965:194-195). Ferraro and Ferraro (1966:44-46) illustrate numerous late nineteenth and early twentieth century examples of these containers under pickles and peppersauces, condiments, and food containers. A colorless glass bottle finish with a long straight neck was found in unit 25-B. This cylindrical continuous thread, external screw topped item may be from a screw top "champagne" catsup (Putnam 1965:194).

Several thin colorless body sherds found in the lower levels of excavation unit 25-B may have been from a decorative mustard jar or other condiment bottle. These sherds were molded in raised, rounded parallel ribs. A tulip-shaped jelly jar with a plain smooth rim and a molded, ribbed design was reconstructed from clear sherds found in the Operation 21 test trench C (Figure 5.31).

Clear glass sherds from excavation unit 25-B were reconstructed to form a partial bottle (Figure 5.32). This straight cylindrical bottle has an applied packer finish, and the straight wide neck slopes gently onto the shoulder. The base is missing. The stylized letters "$\text{G}^{\text{P}}\text{S}^{\text{Co}}$" are embossed on the side of the bottle. The "P" overlaps the "S" so it is difficult to tell whether the logo should read "GPS Co." or "GSP Co." No maker was found for this item.

An embossed clear glass base sherd has the letters AP centered inside an oval ring; the words "TRAD[E] [MA]RK MADE" are along three sides of the centered embossment.

The letter "C" appears on a fragmentary light green glass base sherd.

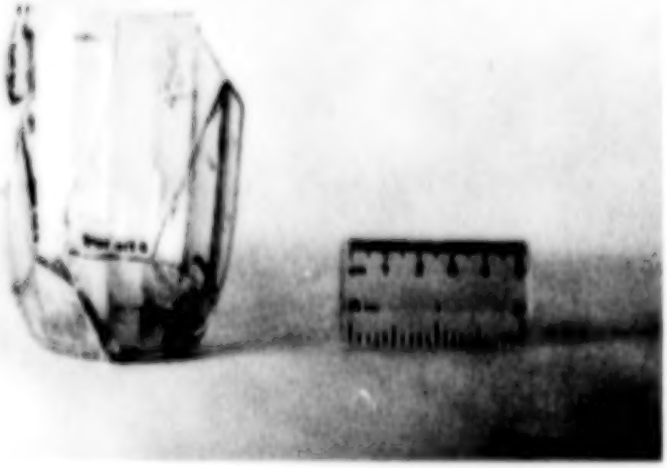


Figure 5.31: Tulip-shaped jelly glass with plain rim

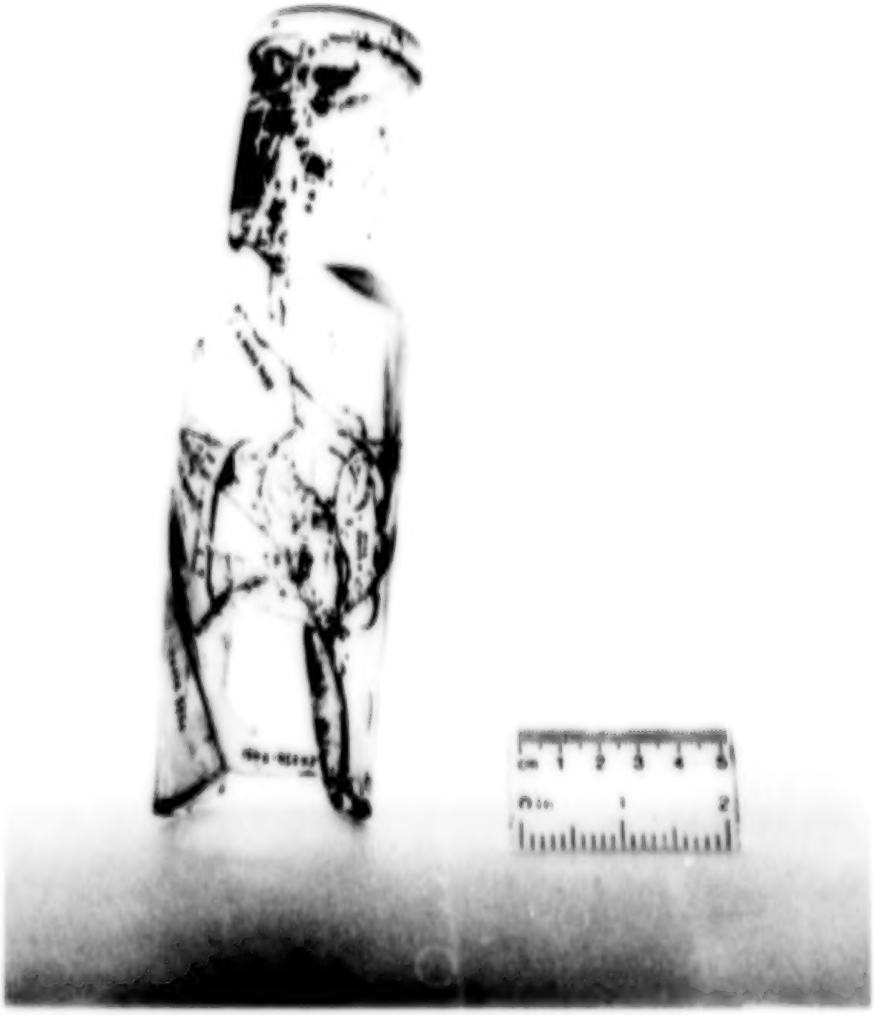


Figure 5.32: Partially reconstructed embossed colorless glass culinary bottle

Parts of several preserve jar bases were found in excavation unit 25-E. These colorless glass, cup-mold made bases have the inscription "THE T.A. SNIDER PRESERVE CO -- CINCINNATI O[HIO]" around the perimeter. The T.A. Snider Preserve Company operated in Cinncinati, Ohio, after 1884, in Milldale, Kentucky 1879, and in Chicago after 1923 (Toulouse 1971:449-450). An S inside a diamond is embossed on the center of one of the bases. This logo dates to about 1900 (Toulouse, 1971:449-450).

A partial extract bottle was found in the Operation 21 Test trench C. This panelled bottle is oval in cross section with square shoulders. One panel is slightly concave; the opposite side is slightly convex. The extract lip is smoothly finished; the seams extend 2/3 the way up the neck. The base is embossed with a series of hatch marks around the perimeter.

Pieces of what may have been milk bottles were recovered from the trash deposits in unit 25-D and the Operation 21 test trench A. These colorless glass sherds come from a wide mouth bottle with a short neck, and rounded shoulders. The bottle was made in a two piece mold, and has an applied packer finish 1/4 inch wide. There is a small ledge about 1/16 inch wide on the interior mouth of the bottle for the inset cardboard cap (Figure 5.15o).

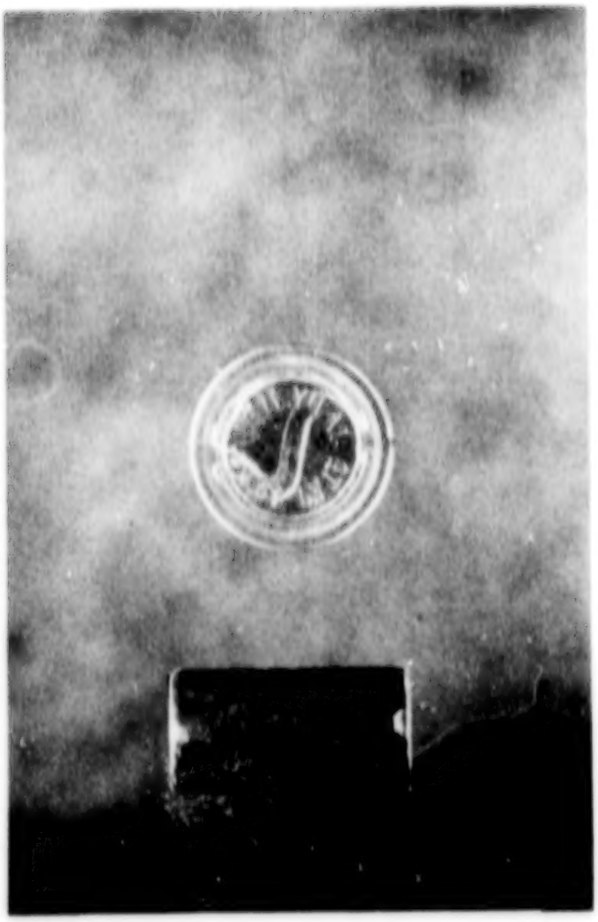
Remnants of several different types of jelly glasses were found in the pre-1900 trash dump. One variety has fairly thick glass, and the smooth rim is slightly indented to about 9/32 inch below the rim edge. No doubt this indentation was for the flat metal lid. These shallow, easily removable, slip-on tin lids were produced to fit over the top of the jar, which, when the condiment was gone, could be used as a tumbler. Similar "mustard or jelly tumblers" are shown in Putnam (1965:201). "Tin Top Jelly Tumblers, with covers which can readily be removed and put on" were sold in the 1895 Ward's catalog for 29 cents a dozen for the 1/3 pint size, or 33 cents per dozen for the 1/2 pint size (Montgomery Ward & Co. 1895:542). Short squat jelly tumblers were also available through the catalog; these heavy glasses came with glass covers to protect the contents (Ibid.).

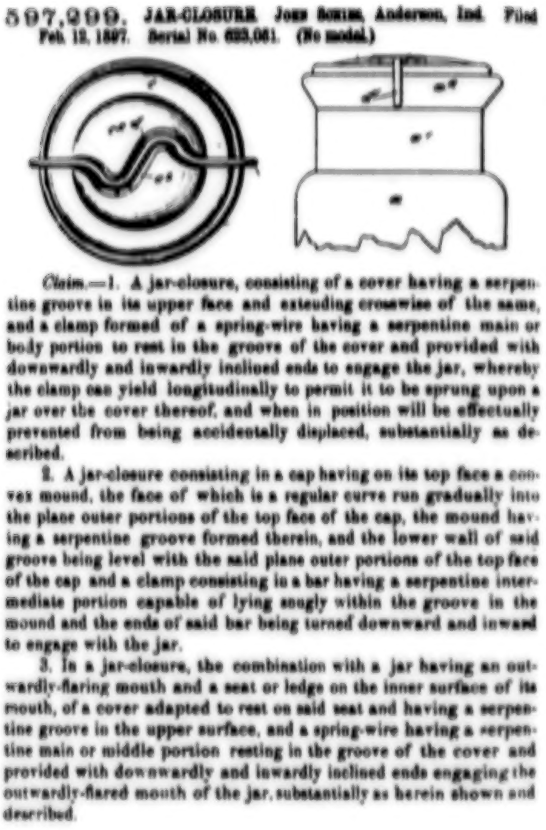
One closure from the Gold Rush levels is of particular interest (Figure 5.33a). This whole clear glass lid is designed to fit onto the top of a jar. On the inside on the lid is a shallow, narrow flange which would extend into the mouth of the jar. On the top is an indented design resembling an elongated "S"; there are two raised nibs on either side of the top to hold a wire closure in place. On the underside of the lid is the embossed inscription "PAT$^{\underline{D}}$ JANY. 11$^{\underline{TH}}$ 1898." This legend is in mirror image so it can be read down through the top of the lid. The Official Gazette of the United States Patent Office (January - March 1898:296) shows that patent number 597,299 for a "jar-closure" was issued to John Schies of Anderson, Indiana on January 11, 1898. Mr. Shies's patent is illustrated and described in Figure 5.33b. This small lid (1-7/8 inches in diameter) was probably from a condiment jar of some sort.

A nearly complete milk glass-lined zinc canning jar lid was found in stratum E of excavation unit 25-D. This 2-7/8 inch diameter continuous thread deep lid has the words "MASON FRUIT JAR COMPANY / PHILAD A PA." around the perimeter of the liner; the numerals 84 are in the center of the liner, surrounded by a raised circle. The company operated in Philadelphia between 1885 and 1900 (Toulouse 1971:344-345). Several sherds of milk glass canning jar lid liner(s) were also found in the Gold Rush deposits. One such item still has a few fragments of the zinc lid attached.

A fragment of a colorless glass canning jar lid was found in unit 25-B. This rim sherd is gently rounded in a cup-like manner to fit down over the exterior of the fruit jar lip. Such lids were used with lightening fasteners, toggles, bails, spring clips, wire and cast iron yokes, crossbars, etc.

A few ceramic sherds are included in the food storage class. Twenty-seven whiteware sherds mend to form part of a cylindrical





597,299. JAR-CLOSURE. John [illegible], Anderson, Ind. Filed Feb. 12, 1897. Serial No. 623,061. (No model.)

Claim.—1. A jar-closure, consisting of a cover having a serpentine groove in its upper face and extending crosswise of the same, and a clamp formed of a spring-wire having a serpentine main or body portion to rest in the groove of the cover and provided with downwardly and inwardly inclined ends to engage the jar, whereby the clamp can yield longitudinally to permit it to be sprung upon a jar over the cover thereof, and when in position will be effectually prevented from being accidentally displaced, substantially as described.

2. A jar-closure consisting in a cap having on its top face a convex mound, the face of which is a regular curve run gradually into the plane outer portions of the top face of the cap, the mound having a serpentine groove formed therein, and the lower wall of said groove being level with the said plane outer portions of the top face of the cap and a clamp consisting in a bar having a serpentine intermediate portion capable of lying snugly within the groove in the mound and the ends of said bar being turned downward and inward to engage with the jar.

3. In a jar-closure, the combination with a jar having an outwardly-flaring mouth and a seat or ledge on the inner surface of its mouth, of a cover adapted to rest on said seat and having a serpentine groove in the upper surface, and a spring-wire having a serpentine main or middle portion resting in the groove of the cover and provided with downwardly and inwardly inclined ends engaging the outwardly-flared mouth of the jar, substantially as herein shown and described.

Figure 5.33: Colorless glass lid. Source: Official Gazette of the United States Patent Office (January-March, 1898:296).

marmalade jar, which is decorated with a black, printed floral (leaves and acorns) wreath design (Figure 5.34). The words "GRAND M[EDAL OF MERIT] / JAM [ES KEILLER & SONS] / [DUNDEE] / M [ARMALADE] / ONLY PRIZE M [EDAL FOR MARMALADE] / LON [DON, 1852?] / GREA [T BRITAIN]" appear on the side. This jam jar is illustrated in a book on food packaging by Sacharow and Griffin (1970:4). Herskovitz documents the presence at Fort Bowie of a similar container and notes that the London firm of Keiller and Son was established in 1797 (1978:111).

According to another author, the product we know today as marmalade was invented by Mrs. James Keiller, the wife of a Dundee (Scotland) grocer (Jones 1961:n.p.). Because a storm delayed a Spanish ship, or so the story goes, Mr. Keiller was able to acquire a shipment of oranges and sugar cheaply, whereupon Mrs. Keiller used her quince "marmalet" (preserve) recipe to concoct a batch of marmalade.[2] The product became so successful that Mr. Keiller gave "up his grocery business and concentrate[d] on the manufacture of Marmalade, the Company being established in 1797" (ibid).

Part of another rim, identical to the above rim, was found in the same area, as were fragments of a hard whiteware with a creamy white glaze. These sherds mended to form a cylindrical vessel of about the same size and shape as the item described above. Judging by its general configuration, this item also held marmalade or a similar product.

Of the great number of tin can fragments found in the Gold Rush trash deposits, a few rim and/or base portions are preserved. There is

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[2] According to Jones (1961:n.p.), the term marmalade was "used by our predecessors for any conserve made from fruit and sugar, in fact that we today call jam. It was not, therefore, until Mrs. Keiller came into the picture that the word - 'Marmalade' became identified with oranges."

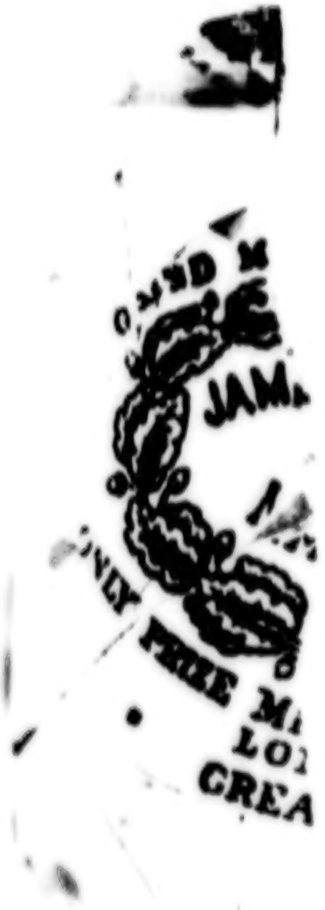

Figure 5.34: Dundee Marmalade jar

at least one square or rectangular can with the rim lapped over the exterior of the body.

The edges do not appear to be rolled as in modern sanitary cans. Another item consists of a narrow strip (about 3/4 inch high) between two seams; it may be the side of a sardine can or another similar container. The tapered, square shape was patented in 1875 (Fontana and Greenleaf 1962:73-74).

Of the round cans, there is at least one with a 3-inch diameter, a 4-inch diameter, and another with a 6- to 8-inch diameter. These rims are also of the exterior, lapped variety, predating the sanitary can. By 1902, production of the sanitary can had begun in the United States, but it was not until 1922 that it gained widespread acceptance (Fontana and Greenleaf 1962:73). Because the rim seals on the cans found do not appear to be of the sanitary variety, they likely pre-date 1922.

The identifiable round cans found are also characterized by a series of concentric circles on the end, with the innermost one being slightly depressed, and having a slightly raised rim around its perimeter. This suggests the possibility of hole-in-top cans. Hole-in-top cans were first made in 1810, but were largely replaced by sanitary cans by 1922, with the exception of milk cans which continued to use hole-in-top closures until quite late (Fontana and Greenleaf 1962:70, 74). Unfortunately, with the exception of one example, none of these center rings are complete, so it is impossible to determine their method of sealing. The one complete example does have a slightly raised dot in the center which may represent the lead solder seal, but it is very corroded and difficult to determine with certainty. One piece still has a partial label dimly visible through the rust. Though this may be only a geometric design, it appears to read M M.

Can keys are included in the Gold Rush Collections also. These include a long key with a wide (5-1/4 inch) rolled strip still attached, and two smaller keys, one with part of the roll strip remaining. Key strip openers post-date 1895 (Fontana and Greenleaf 1962:71).

Commonly available canned goods included such items as condensed milk, Vienna sausage, sauerkraut, and sweet potatoes. Some of the staple items which were to accompany the miners to the Yukon included baking powder, baking soda, evaporated vegetable soup and evaporated potatoes (Seattle Post Intelligencer, 21 July 1898: n.p.). These were probably all packaged in metal cans of one sort or other.

A curved wire bail was found in the Gold Rush deposits. Lard was commonly packaged in tin pails with a wire bail handle and pry-off lid. These pails varied in size; a 3-pound pail sold for 30¢ per pail, 5 pounds went for 50¢, and 10 pounds for a dollar (Daily Alaskan, 27 May 1899:2). These pails were often reused as dry storage containers or lunch pails.

Post-1900 Food Storage: An entire olive or condiment bottle was found in the post-1900 strata of unit A (Figure 5.35). This machine-made bottle has a continuous thread lip, and seams to the top of the finish and around the interior rim of the lip. The side seams continue from their intersection with the heel seam to a lightly off center basal seam. The center of the base has the embossed inscription 4-H-5344. This relatively recent bottle is definitely of twentieth century manufacture. This bottle was found in association with pieces of beaverboard, a pick-axe head, and assorted construction debris.

One of the aqua jar finishes found in the upper levels of unit 25-A appears to have come from a shoulder sealing canning jar. The shoulder angles sharply inward on a flat plane from the body, and there is no bead visible below the continuous threaded finish. The original jar probably dates to the early part of the century, prior to 1915 (Toulouse 1969b:394).

Canning jars were changed relatively little from their inception until the advent of bottling machines. By the turn of the century, there were two basic types of canning jars, the original shoulder seal, and the "improved" top seal. In about 1915, glassmakers began to add a glass ring or bead just above the shoulder and below the threaded neck. This

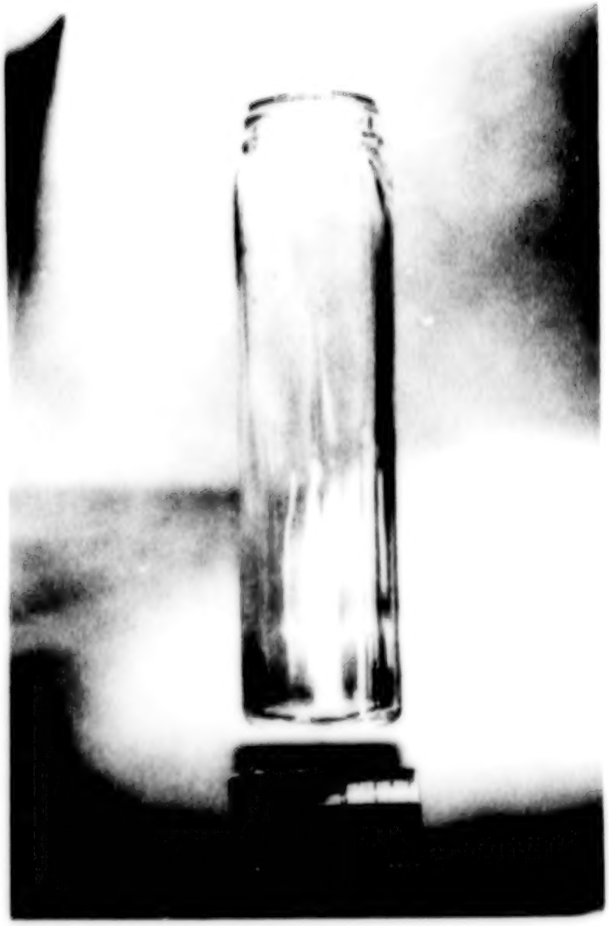

Figure 5.35: Colorless glass olive or condiment jar

bead facilitated extraction of the jar from the mold, and the jar lid or closure could be screwed or clamped tight against a rubber gasket which fitted snugly on this even, uniform bead, sealing the jar (Toulouse 1969b:394).

Aqua glass was used for fruit jars well into the twentieth century, so many of the other aqua sherds found in the upper levels may have come from canning vessels. Several embossed aqua sherds found in unit 25-A were too fragmentary to determine the original legend; the only identifiable mark being the letter "S", but their general color and configuration suggest canning jars.

One colorless glass base sherd from a machine-made bottle found in unit 25-A has the embossed mark of the Hazel-Atlas Company on its base. This company was initially organized in Wellsburg, West Virginia in 1887 to produce opal glass inserts for the zinc Mason cap used on canning jars. A year late, its founder C.N. Brady, opened a plant in Washington, Pennsylvania. Over the next half century, the firm expanded, becoming the Hazel-Atlas company in 1902. Their canning jars became known as the "Atlas" jars; their distinctive logo (a slanting "H" over the block letter "A") was in use from around 1920 to 1964 (Toulouse 1971:239; Herst 1987 indicates the date should be 1923). The numeral 5 below the embossed logo on this small base (less than 2 inches in dimeter), probably indicates the mold number. This small bottle/jar may have been used for such foodstuffs as olives or condiments.

Several colorless glass items found in the Operation 21 test trench have partial embossed marks; one such mark is composed of a geometric pattern of intersecting circles, another is a half-circle bisected by a straight line. Others have embossed letters, but were too fragmentary to identify with any confidence. Embossed numerals and/or a combination of letters and numerals appear on the base of a number of clear glass items, but generally speaking, these are of little help in identification of the bottle date or manufacturer since they generally indicate only the mold number.

Four colorless glass sherds from the post-1900 levels of unit 25-A are from a straight shouldered jar with two parallel bands around the lip. Rather than a continuous thread finish, this jar evidently had a push on/clamp on lid which sat on the first of the bands about 1/2 inch below the lip. This jar appears to have been machine made. A clear glass bottle neck and lip with a non-continuous (interrupted) thread and bead finish was found in unit 25-B. A badly rusted ferrous cap was still in place on the bottle.

Another colorless glass finish has a raised band 1/2 inch below the lip, with a parallel, stepped indentation for a push-on lid 1/4 inch below the rim. There is a faint indentation on the top inner edge of the lip. This may be a manufacturing mark left by an automatic bottling machine--i.e. by a "neck-shaping plug and a collar to guide it" (Miller and Sullivan 1981:15).

Several colorless screw-top narrow-mouth bottle finishes were found in the upper levels. These continuous thread lips have a faint indentation on the outer edge of the rim, indicating a machine-made bottle (Miller and Sullivan 1981:15). Catsup was commonly sold in such bottles.

Many of the colorless sherds found near the Peniel Mission in the twentieth-century strata were anamolous, curved shoulder or lower body sherds with both horizontal and vertical seams. Some of these were angular, suggesting a square or rectangular body and round neck. It is likely that these sherds were from pickle and preserve wares, many of which had either round or angular bodies and a seam or bead at the junction of the neck and the body (see Putnam 1965:189 et seq. for illustrations). Other colorless sherds from the upper levels of the test excavations include those from both cup-bottomed and post-bottomed molds.

One distinctive closure found in the upper levels of excavation unit A was a ferrous screw top lid (continuous thread) painted in red, white and blue (Figure 5.36). This jar lid carried an advertisement for Kraft's

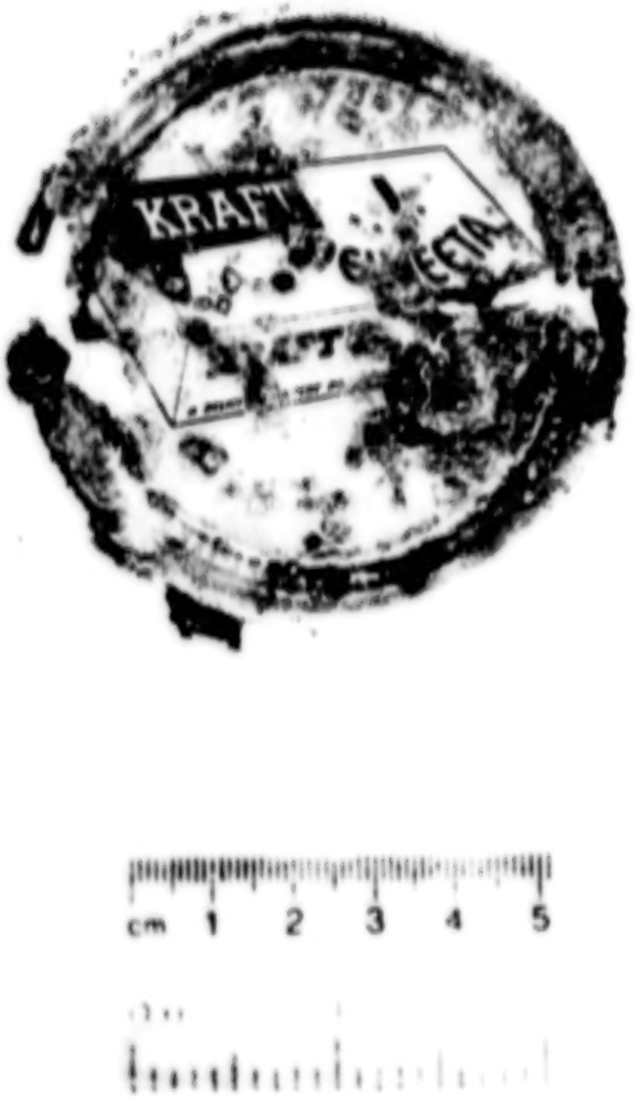

Figure 5.36: Kraft mayonnaise jar lid.

Velveeta cheese; in white above a picture of a Kraft cheese box are the words "[cons]ider this too! KRAFT!! VELVEETA, A DELICIOUS CHEESE PRO[DUCT]. . . ." Beneath the picture of the box is the word "Delicious . . . ," and on the outer part of the lid face in an indentation is "DIGESTIBLE." This lid, probably from a mayonnaise or Miracle Whip salad dressing jar, post-dates 1928. J.L. Kraft established a wholesale cheese business in Chicago in 1903. Six years later four of Kraft's brothers joined the firm and it became J.L. Kraft & Bros. Co. Over the next decade and a half, Kraft acquired several companies, becoming the Kraft-Phoenix Cheese Corporation in 1928. It took several years before the products formerly made by the acquired companies were added to the Kraft line; these products included mayonnaise in 1928, and Miracle Whip salad dressing in 1933. Velveeta pasturized process cheese spread was introduced in 1928 (Horne 1987; Adkins 1987; Kraft 1985:21).

A milk glass liner for a zinc canning jar lid was found in the uppermost level of the Operation 21 test trench B (Figure 5.37). The embossed inscription on the interior reads "PORCELAIN LINED CAP FOR MASON FRUIT JARS." The porcelain liner was first patented for use in 1869 by Louis R. Boyd (Toulouse 1969b:350). Boyd licensed several companies to make the inserts, including Mason, Hero, etc. Since the caps were sold separately from jars until 1885 or 1890, the fact that this is "for Mason Fruit Jars" does not necessarily indicate it was manufactured by Mason. The Mason Fruit Jar Company itself dates circa 1885 to 1900, but their caps have what is referred to as a "Tudor Rose" design in the center (Toulouse 1971:344).

The use of zinc fruit jar lids continues up to the present. These lids are reusable, and are not easily corroded by acid fruits and vegetables. Most important, the relatively soft zinc is slightly malleable, allowing the lid edges to be bent inward to afford a better seal. This is most commonly accomplished just before the lids are sterilized. The lid is screwed onto the jar, and the edge of the lid is then pressed down and in against the rubber jar ring, using a heavy knife at an oblique angle.

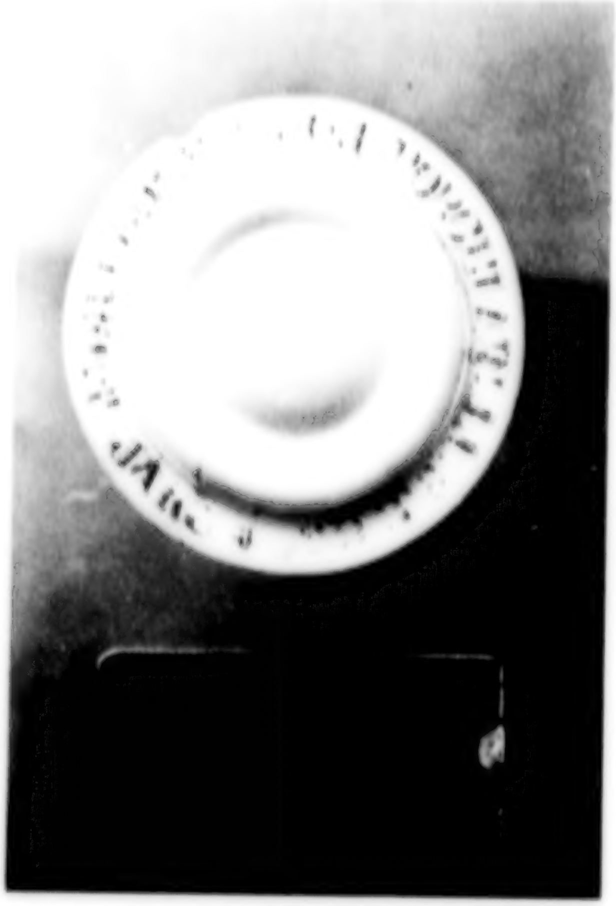

Figure 5.37: Porcelain liner for Mason canning jar lid

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Sherds of other glass lids were found in the excavations. An amethyst-colored sherd has one smooth face; the opposite face has a slightly raised ring close to the outside perimeter. Unfortunately the rim edge is missing so it is impossible to tell whether the lid fit into or over the jar mouth. Near its perimeter, a similar colorless canning jar lid rim fragment has a raised lip to fit into the jar top. This sort of glass lid was used with an open top cap to make a two part lid. Other clear and amethyst glass lid sherds appear to be the type used with canning jars with lightening closures; that is, the cup-like lid has a rim that fits down around the outside perimeter of the jar mouth.

Mixed Strata Food Storage: The majority of the 122 items from the mixed strata overlying the trash deposits come from cans (n=49), plain aqua body sherds (n=15), and colorless body sherds (n=45).

A 2-inch square, colorless glass bottle base with an impressed maker's mark was found in stratum D of the Operation 21 test trench A. The body appears to have been made in a two part mold with vertical mold seams on opposing corners. The base was formed in a cup-bottom mold and has an irregular wavy crease shadowing the horizontal mold seam above the base. This crease was likely caused by a "blow-over", either by putting too much glass in the mold, or by blowing overly long. A recessed circle on the base contains an embossed maker's mark which reads "I P G C^{o}." within a large diamond. This mark belongs to the Illinois Pacific Glass Company of San Francisco. It dates between 1902 and 1930 (Toulouse 1971:269-270). Beneath the maker's mark, the number "14" is embossed.

Shovel Tests Food Storage: A dime-sized piece of yellowed cellophane found in the 1983 shovel tests has green printing that reads "NAT. / MOISTU/ OCC /CH." This may have stood for "Natural Moisture Mozzarella Cheese." Cellophane was invented in 1911 by Swiss chemist Jacques Brandeon, and first produced in the United States in 1924.

Six colorless glass sherds mend to form portions of a canning jar found in the shovel tests. The jar has a continuous screw thread finish and a ground lip. The side walls merge into the screw threads almost as a straight line, which indicates it was a top seal. The thread finish appears to be either automatically or semi-automatically produced. It may be that this was a commercially used jar, which was later re-used for home canning. Perhaps the lip had been nicked and was reground for use. Another possibility is that this jar dates to the transition period between 1896 and 1910 when the automatic jar making process had not yet been perfected. A continuous thread finish and ground lip of aqua glass were also found in the shovel tests.

Unit 25-D Disturbed Strata Food Storage: Several aqua glass bottle finishes from this stratum, one with a long neck, have what might be described as a double overlapped collar. That is, the upper portion is a second slanted collar that slopes upward to disappear under the upper portion (Figure 5.15q). Similar bottle finishes are pictured in Munsey's (1970:107) discussion of mineral water bottles, and in Wilson (1981:90) as a salad or olive-oil bottle. Wilson calls this a "sauce neck finish"; Jones and Sullivan a "stopper finish" (1985:89).

Several aqua glass oil finishes were also found in stratum D. A colorless glass continuous thread finish from this stratum is almost identical to the champagne catsup finish described earlier for the Gold Rush period deposits.

A smooth, round, colorless glass base sherd found in this stratum was made in a cup-bottom mold. The letter "M" is centered inside a circle on the base. According to Berge (1980:90-91), this logo has been the trademark of the Maryland Glass Corporation, Baltimore, Maryland, since 1916.

Another similar cup-molded clear base sherd has a curvilinear design above the numerals "189[3?]." The curvilinear logo is that used by the Vacuum Jar Glass Company in San Francisco. The operation dates for this company are unknown, but the logo may date to about 1893. The design was from

> a vacuum seal patented by Franz Guilleaume and Ewald Goltstein of Germany but sold and advertised by the San Francisco jobber named above. The jar was more of a commercial package than a home canner (Toulouse 1971:518).

An embossed aqua bottle base found in stratum D bears the letters "A.B.G.M. CO." around its perimeter. The rest of the inscription, reading "P3" is centered in the middle of the post-molded base. The bottle was manufactured by the Adolphus Busch Glass Manufacturing Company, Belleville, Illinois between 1886 and 1907, or, at St. Louis, Missouri between 1904 and 1928 (Toulouse 1971:26-27).

The mark NB appears on another sherd, a slightly uneven aqua cup-molded base. The "NB" stands for North British Bottle Manufacturing Company, Ltd. at Shettleston (Glasgow) Scotland, 1903-1937. Many of this company's bottles "found their way to the United States" (Toulouse 1971:377).

The embossed letters and numerals "J05D / S" appear on a fragment of a slightly indented cup-molded base once belonging to an aqua culinary bottle. The numerals are the serial number of the mold. The letters "J", "D", and "S" stand for John Duncan and Sons, New York, New York, circa 1880-1900.

> Duncan was the American licensee for importing Lea & Perrins sauce into America. He had his own bottles made in England, filled there, and then shipped to him. About 1900 he began to make the sauce in America under a different license (Toulouse 1971:277).

Like many of the base sherds found in the Gold Rush strata, fragmentary colorless and aqua bottle bases from stratum D were embossed with various numerals and/or letters. These include the numerals "11," "1271," "1013," and "1978" centered on round, cup-bottom molded, bordered bases. These numerals probably stand for the mold used. Portions of an embossed 4-point star are found on one amethyst base sherd. The maker has not been identified.

Other items include embossed colorless and aqua body sherds. Judging by the sherd morphology and possible letter combinations (e.g. the letters "S," "ON," etc), some of these may be from canning jars. Parts of several continuous thread, wide lip, colorless and aqua glass finishes were found in stratum D. The aqua items had a ground lip edge similar to that used for fruit jars; the colorless ones did not.

Seven light green, embossed, round, bordered base fragments mend to form portions of three bottles. The individual sherds have various parts of the inscription "CS & C$^{\underline{o}}$ L$^{\underline{D}}$" around the perimeter of the base. This inscription stands for Cannington, Shaw and Company, St. Helens, Lancaster, England. Toulouse (1971:147-148) notes that these bottles are "not rare in ghost towns of the western United States. . ." This company began to use the Ashley semi-automatic bottling machine in 1897, and installed two Owens machines in 1908. They made a "wide variety of narrow-neck and wide-mouth containers in pale and dark green" (Toulouse 1971:147-148). The Cannington & Shaw bottles generally contained foodstuffs such as "wines, spirits, pickles, and vinegar. . . ." This bottle probably dates between circa 1875 and 1913.

Fragments of a preserve jar were found in unit 25-D.D. These cup-molded base sherds have the inscription "CINCIN[ATI] across the center; T. . ./ PRESERVE[ES]" is written around the edge. These sherds are probably from a Snider preserves jar (see the earlier discussion of this manufacturer).

Two colorless glass sherds from the same bottle found in stratum D appear to be virtually identical to hexagonal pickle containers shown in Putnam (1965:187, 189). This hexagonal bottle had a somewhat oval base that was probably made in a cup-botom mold. Other colorless sherds from this area are from a straight sided, cup-molded bottle with bordered type oval (?) base. Centered on the base are the letters S.B.W. According to Toulouse (1971:464) "these initials do not correspond with any known glassmaker . . ." but the bottle may pre-date 1900.

A whole clear glass lid with a stylized, elongated "S" on the top found in stratum D is identical to the item described earlier. The embossed patent date, in the center of the lid, is surrounded by two concentric rings which are stepped down, allowing the lid to fit securely in place on the jar mouth.

Fragments of zinc canning jar lids were found in several areas of the excavation, including stratum D. A thin circular cork disc, faced and edged with corroded ferrous metal, is all that remains of some sort of bottle cap, perhaps a crown cap.

Numerous "tin" can fragments were found in this strata. Among these were also a number of can keys, some with the winding opener strip still attached.

FOOD PREPARATION CLASS

Only two items, fragments of a grey graniteware pan or bowl, have been included in the Food Preparation Class. Both are from the Gold Rush deposits.

FOOD REMAINS CLASS

Introduction

The following sections will describe, analyze, and interpret the food remains from the Peniel Mission excavations. The macrofloral remains (peach, cherry, and plum pits, and nut hulls) are self-explanatory; these items are listed in Table 5.13. The faunal remains include bivalves such as clam and oyster shell, and bone from both domesticated and wild fauna. A summary of the faunal materials is also shown in Table 5.14. The list of fauna represented by site findings is included as Appendix A.3.

Methodology: A large part of the faunal analysis was done by Dr. Elaine Anderson. Identification was based on her private faunal materials collection and on comparative material at the Denver Museum of Natural History. Analysis completed by the author utilized the Colorado Archeological Society comparative faunal collection. The formal faunal analysis concentrated on identification of the genus, species, common name, weight and body part for each item. Some of the bone was in fairly poor condition, preventing identification of genus or species. Instead, the bone fragments were classed, where feasible, as large, medium or small mammal, bird, etc. On partial long bones, it was noted whether they were distal or proximal. Also identified, where possible, was whether the bone was whole or partial; right, left, or axial; adult, juvenile, or pre-natal. If the bone was partial, it was noted whether the fragment was a distal, proximal or midsection portion.

Table 5.13: Summary of food remains

FOOD REMAINS GROUP		FILL	GOLD	MIXED	POST	STS	STS	F202	U25-D	TOTAL
			RUSH		1900	1983	1985	& F204	DIST.	
Type	Description									
bone		28	604	59	26	9	103	6	206	1041
shell	bivalve	0	30	4	1	0	0	0	1	36
eggshell	fragments	0	22	0	0	1	0	0	0	23
peach pit	fragments	0	10	0	4	1	0	0	1	16
peach pit	whole	10	0	1	0	0	0	0	1	12
peanut hull	fragments	0	1	0	0	0	0	0	0	1
plum pit	fragments	0	0	0	1	0	0	0	0	1
plum pit	whole	0	1	0	0	0	0	0	0	1
cherry pit	fragments	0	1	0	0	0	0	0	0	1
cherry pit	whole	0	1	0	0	0	0	0	0	1
nut hull	unid. fragment	0	1	0	0	0	0	0	0	1
										0
TOTAL		38	671	64	32	11	103	6	209	1134

Table 5.14: Summary of faunal materials

FAUNAL MATERIAL BY TYPE	FILL	GOLD RUSH	MIXED	POST 1900	STS 1983	STS 1985	F202 & 204	U25-D DIST.	TOTAL
Game									
bear, black						2			2
beaver			1						1
bird, cf duck		1							1
bird, cf grouse/grouse sized		41	1	2				1	45
bird, canada goose-sized		1							1
deer/cf deer		5	1	1				3	10
hare, snowshoe		8	4						12
vole								1	1
wapiti, cf								1	1
Domesticated species									0
bird, chicken-sized		1					2		3
cat, domestic	1	49							50
cattle, domestic		5	2	1				7	15
large mammal, cow-sized	1	9	1	3				3	17
sheep, domestic		10	2	1	1	49		4	67
swine, domestic	1	6	1	1	1			1	11
turkey, domestic		4						1	5
Other									0
crayfish		4						1	5
shell		30	4	1				2	37
fish		65				1		5	71
Unidentified									0
artiodactyl	1			1			1	1	4
artiodactyl, large	1	9						2	12
artiodactyl, small				1				1	2
mammal, indeterminate		29		1					30
mammal, medium to large		52							52
mammal, medium	4	13	1					8	26
mammal, large	13	127	39	9	6	49	3	163	409
mammal, cat or rabbit-sized		2	3						5
bird, long-legged				1					1
bird, indeterminate		160	1	4	1	2		3	171
bird, small indeterminate		6							6
unknown bone	6	1	2					1	10
									0
TOTAL	28	638	63	27	9	103	6	209	1083

Fish bones encountered during the excavation include *possible* specimens of tomcod (*Microgadus proximus*); a small salmonid species, perhaps trout or salmon; and an unidentified fish. Tomcod are saltwater fish, not native to freshwater streams. Some salmonids are anadromous fish, primarily denizens of salt water who enter fresh water to spawn. Freshwater species include numerous varieties of trout. Cutthroat trout are found in the Skagway area.

Determination of the source of these bones is problematical. The trash deposits were in a shallow freshwater stream that is periodically innundated by high tides from the more saline waters of the Inland Passage. The bones may have been left behind in a tangle of seaweed and driftwood as the high water receded. Eagles and other predators feed on fish. Their feeding remains, sometimes deposited some distance from the prey capture area, often include bone.

Some of the salmonid and the unidentified fish bones are calcined, suggesting they may have been used for human food. The bones could have been burned during/following cooking. Alternately, these remains may have been deposited in the stream dump by humans, animals, or natural forces such as tides and flooding, where the burning of the dump calcined the bone.

Because the fish and shell assemblage could have originated elsewhere than the rest of the collection, and could become intrusive elements in the assemblage, these items were not identified to the same level of detail as were the mammal and bird bones, and are simply listed in the inventory.

The minimum number of individuals (MNI) was not calculated for this collection. Typically, such calculations depend upon the analysis of paired elements, and include age and size notations. For these reasons, this process was inappropriate for the Peniel Mission collection. The bones are too fragmentary, the excavations provided only a small sample of the dump materials, and the town had a market type economy, which tends to skew the distribution of certain body parts.

The type of bone modification--calcining (burned blue-white), burning (carbonized black), cutting, sawing, gnawing, or chewing--was indicated for each bone. Butchered bones were compared against photographs of cuts and butchering charts found in Halliday and Noble (1928) and Romans and Ziegler (1977), and, where possible, the potential cut(s) of meat were identified (Tables 5.15 and 5.16, Figure 5.38). Individual bones were marked off on butchering charts to aid in identification and calculation of meat cuts. Archeological bones were also compared with present day meat cuts. With the exception of the use of power tools, butchering methods have changed very little over the past three-quarters century, so most cuts were easily recognizable (Schulz and Gust 1983:48).

Some butchered items could not be definitively identified as to the cut; most of these nondescript items were fragmentary portions of vertebra or ribs. For example, some of the fragmentary vertebra may have come from a T-bone steak or from butchering debris; sections of ribs may have been part of a rib roast or short ribs (boiling beef). For this reason, a number of the butchered items were not identified by cut.

During analysis, steak bones were divided into two groups. Bones placed in the round bone steak category are uniform slices of long bone, cut at right angles to the long axis of the limb bone, measuring between 1/2 and 3/4 inch thick. The second type of steak (designated a blade bone type) is a section of vertebra and/or rib, again a slice measuring between 1/2 and 3/4 inches thick. Often the vertebra has been sawed on three sides, and exhibits the characteristic "T" or linear shape of a T-bone or club steak, or other steak cut from this part of the animal.

The number of butchered bones identificable to species is too small to present a wholly accurate assessment of the human subsistence patterns in the area. However, the last portion of this chapter will include limited discussions of the possible socioeconomic implications of these data, and some tentative suggestions about the socioeconomic status of the depositing population.

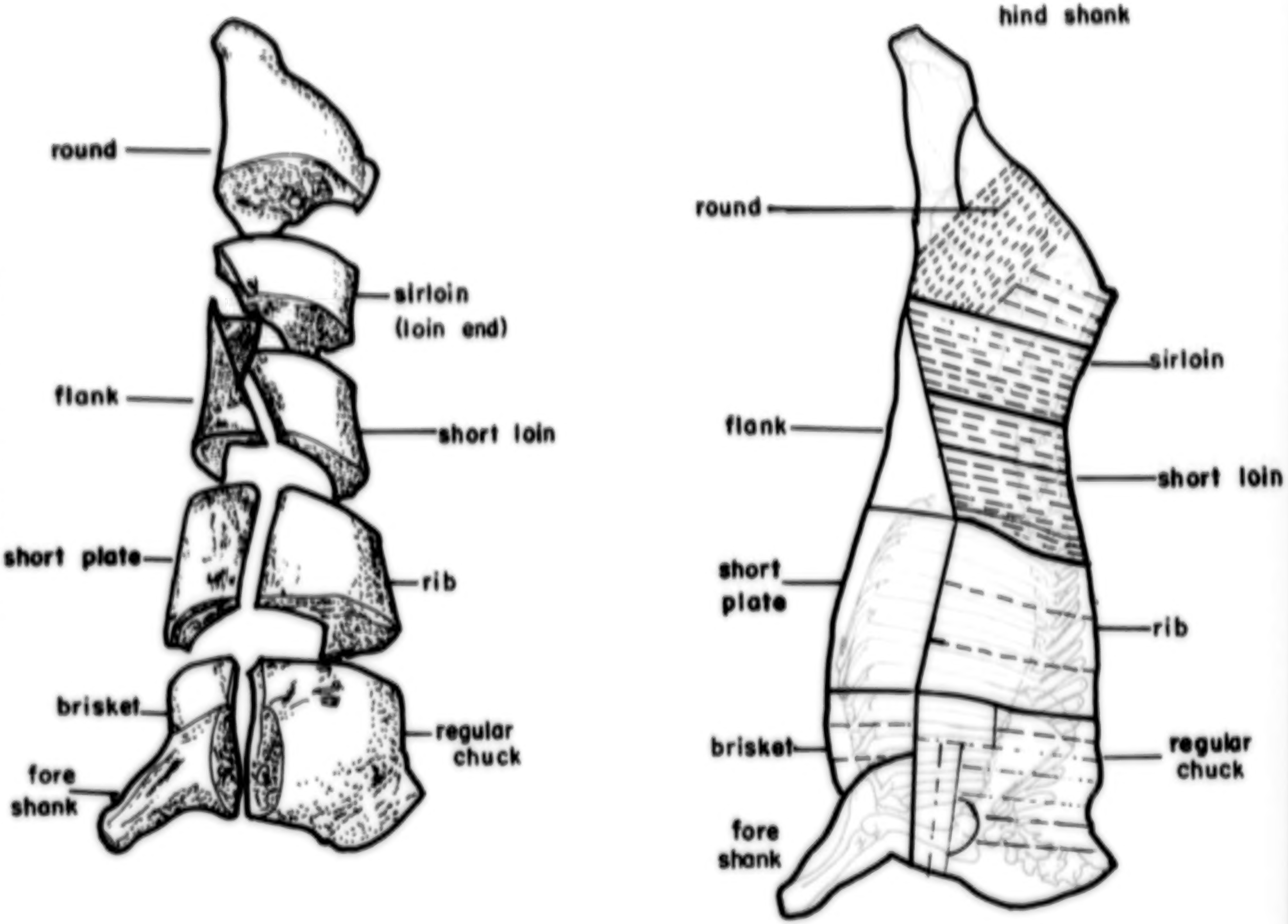

Figure 5.38: Retail Meat Cuts
(adapted from Halliday and Noble 1928:260)

Table 5.15: Summary of Animal Types and Meat Cuts

FAUNAL MATERIAL BY TYPE		F&L	GOLD	MIXED	POST	STS	STS	F202	U25-D	TOTAL
Animal	Meat cut		RUSH		1900	1983	1985	& 204	DIST.	
Game										
deer (venison)	roast, arm		1							1
deer (venison)	boiling meat, butchering discard		4						1	5
deer (venison)	roast, rump								1	1
deer (venison)	soup bone								1	1
grouse (cf)	femur, knife cuts				2					2
Domesticated Species										0
domestic cattle	roast, arm		2	2						4
domestic cattle	boiling cuts, soup bones								3	3
domestic cattle	butchering debris				1					1
domestic cattle	rib steak/roast									0
domestic cattle	roast, blade or chuck								1	1
domestic cattle	roast, standing rib		1		1					2
domestic cattle	steak, blade type								1	1
large mammal, cow-size	roast, chuck			1						1
large mammal, cow-size	roast, rump				1					1
large mammal, cow-size	steak, blade bone		4		1					5
large mammal, cow-size	steak, round bone	1	1		1					3
domestic sheep	discard, hind leg		9							9
domestic sheep	knuckle bones, boiling									0
domestic sheep	leg of lamb					1				1
domestic sheep	roast, shoulder		1	1						2
domestic swine	ham hocks		1							1
domestic swine	ham, picnic					1				1
domestic swine	ham, shank		5		1					6
domestic swine	pig's feet									0
Unidentified Species										0
artiodactyl	roast, round or arm	1								1
artiodactyl, large	roast, rump	1								1
artiodactyl, large/med.	steak, blade bone		3							3
artiodactyl, large	steak, round bone								1	1
artiodactyl, large	steak/chop								1	1
large mammal	roast, blade		1							1
large mammal	boiling meat		5							5
large mammal	roast, rib		6		1					7
large mammal	rib steak/roast	1		2						3
large mammal	roast				1				1	2
large mammal	roast, heel of round		1		1					2
large mammal	short ribs, boil		3						4	7
large mammal	steak, blade bone					1	1	1	2	5
large mammal	steak, round bone		3				1		3	7
medium mammal	roast, blade	1								1
medium mammal	boiling cuts, short ribs		2							2
medium mammal	butchering debris		1							1
medium mammal	roast, rib		1							1
medium mammal	roast, shoulder		1							1
medium mammal	steak, blade bone		1							1
medium mammal	steak, round bone		1							1
TOTAL		5	58	6	11	3	2	1	20	106

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Table 5.16: Summary of meat cuts

MEAT CUTS	FILL	GOLD	MIXED	POST	STS	STS	F202	U25-D	TOTAL
Description		RUSH		1900	1983	1985	& 204	DIST.	
boiling cuts, short ribs		5						4	9
boiling cuts, soup bones								4	4
boiling meat		5							5
butchering debris		14		1				1	16
ham hocks		1							1
ham, picnic					1				1
ham, shank		5		1					6
leg of lamb					1				1
pig's feet		1							1
rib steak/roast	1		2						3
roast				1				1	2
roast, arm		3	2						5
roast, blade or chuck	1	1	1	1				1	5
roast, heel of round		1		1					2
roast, round or arm	1								1
roast, rump	1			1				1	3
roast, shoulder		2	1	1					4
roast, standing rib		8		1					9
steak, blade type		8			1	1	1	3	14
steak, round bone	1	5		1		1		4	12
steak/chop				1				1	2
grouse (cf) femur				2					2
									0
TOTAL	5	59	6	12	3	2	1	20	108

Background: Historical records, especially the local newspapers, make it clear that there were two types of goods stocked by Skagway's merchants or brought in by the Klondikers. The first, goods intended primarily for prospectors headed north on the long journey to the Klondike, were very basic, everyday staples like flour, beans, sugar, bacon, and coffee; items which could be stored for a long period of time. A typical list of supplies might include items similar to those Skagway Pioneer Bernard Moore packed for a trip over the Chilkoot Pass:

> flour, bacon, sugar, dried fruit, rice, coffee, tea and some other miscellaneous provisions in fifty-pound packages with oil sacks around them. . . ." (Moore 1968:41).

Moore also purchased "two tins syrup, one tin lard, and a dozen cans of yeast powder" at Healy's store (the Healy and Wilson Trading Post at Dyea) (Moore 1968:45). The costs of freighting were almost as much as the food itself. For example, the bacon and rice Moore had ordered were not delivered to Sheep Camp (on the Chilkoot Trail) at first "because the natives wanted twelve dollars to bring it. . . ." (Moore 1968:45). In his diary, Bernard Moore described a typical meal on the trail:

> We would fill our tin plates--some used granite pans a couple of inches deep--with boiled beans and bacon, then ate a big plateful of boiled rice and mixed dried stewed prunes and apples; then we had from two to three large tin cups of tea, and several pieces of our homemade camp bread with very little butter, for this luxury had already pegged out, as had also our condensed Eagle Brand milk (Moore 1968:47).

Because of its desirable low weight and bulk, much of the trail food sold to the Klondikers was dried or boneless. In their haste to reach the gold fields, the Klondikers preferred convenience foods, all of which were "boxed, bottled, or canned, and required little preparation" Barnes 1987). These sorts of products would leave little or no trace behind in the archeological record. These foodstuffs also would not be the sort consumed in Skagway, but on the trail or in the gold fields.

Some of the early prospectors relied upon game to supplement the monotonous diet. Although the narrow, wooded areas and the steep, wooded mountainsides of the Skagway River valley did not provide the best environment for game, there was wild food available when the Moores first arrived in the area. They dined frequently on saltwater ducks from the bay and mallards on Mill Creek. Several bears were killed in the area, and the Moores shot six large mountain goats and one kid that had come down to the flats, possibly to feed on seaweed. Bernard Moore described their kill as:

> . . . regular spike-horn goats. They have two black horns slightly curving back to a point, some eight to ten inches long with not much spread. They have long, shaggy, white wool or rather more like wavy hair, and the males have a high hump between the foreshoulders, and their hoofs are cloven. . . . The wool or hair of these animals is used by the natives in this part of Alaska to make into yarn which is afterward made into the noted Chilkat blanket (Moore 1968:124).

Fish and seafood were also important foodstuffs. The younger Moore described fishing in Mill Creek:

> wearing gum boots, caught twenty small trout in the creek with my bare hands in back of our unfinished house; made a good dinner out of them. They averaged about seven inches in length (Moore 1968:116).

In the spring of 1896, the Moores brought in horses, cows, fowls, and pigs. Chickens are visible in early photographs of the Moore cabin. As the town grew, others brought in cows, horses, domesticated goats, oxen, sheep, pigs, chickens, and turkeys. Hay, grain, and chop (a coarsely ground mixture of grains) were available at several provisioners.

Once the Gold Rush had gotten underway, it is likely any game remaining in the immediate Skagway area was quickly decimated. With the establishment of good transportation routes and merchandising outlets, a broad range of foodstuffs became available in local markets and wholesale houses. Products that might have been thought of as luxury items, even in the markets and restaurants of San Francisco, were added to the repertoire of local merchants and eating establishments. Advertisers played up the refinement and good taste of their customers. For example, an advertisement in the December 16, 1899 Daily Alaskan (p.4) reads:

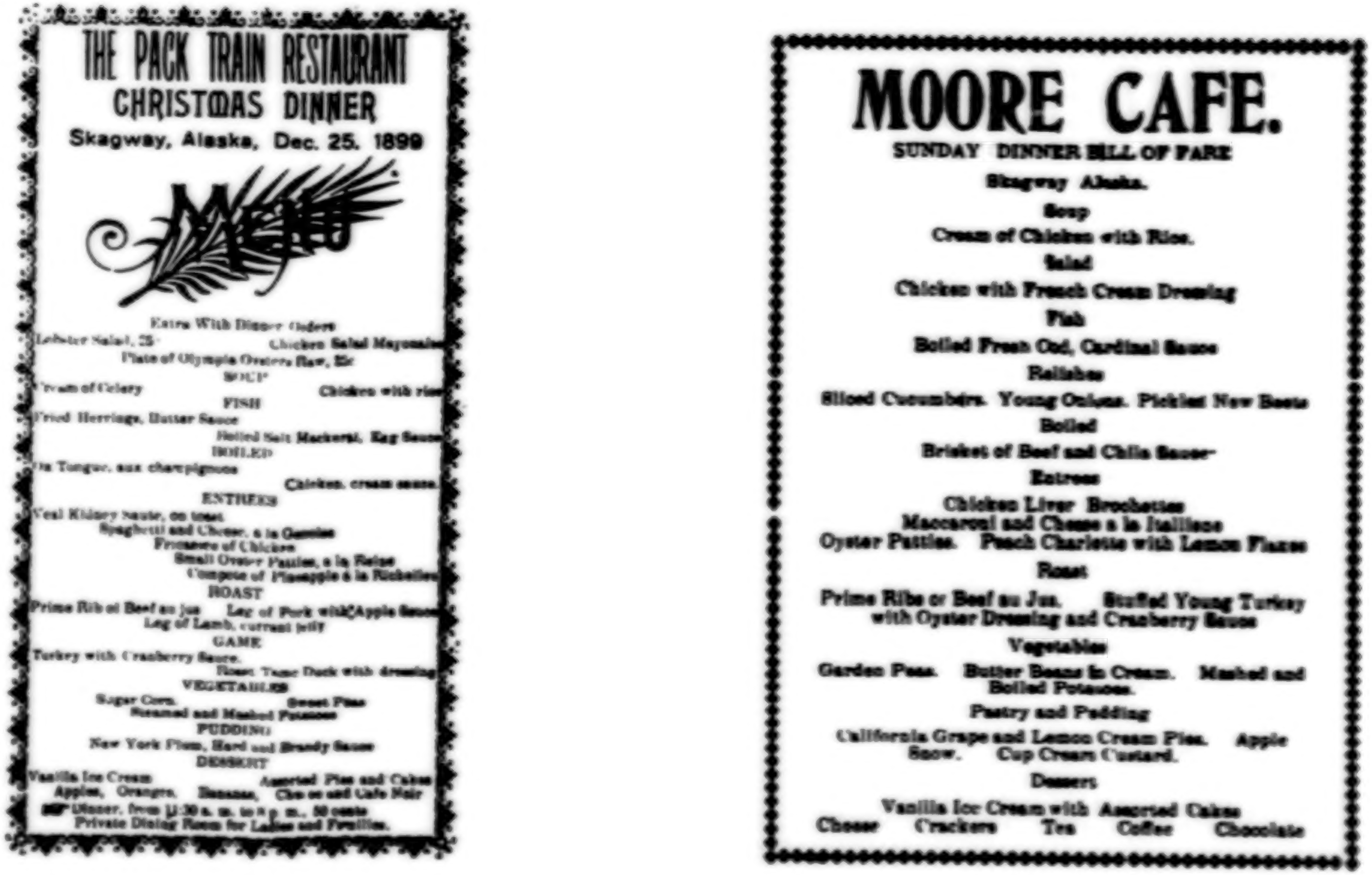
> There is nothing too good for Alaskans, and the taste of the residents is as highly educated as anywhere. Our patrons represent people from every state in the union and each demands as near as can be found, goods "he used to get at home".

The Skagway paper carried daily advertisements and menus for a number of local restaurants. The menus contained a fairly large, cosmopolitan selection of foodstuffs. For example, the Moore Cafe Sunday Dinner bill of fare shown in Figure 5.39 included chicken, beef, turkey, fresh cod, and a wide variety of fruits, vegetables and desserts.

More elegant repasts were served on special occasions by the more prestigious establishments. For Christmas dinner, 1899, the Pack Train Restaurant served 16 types of meat in a variety of fancy sauces (Figure 5.39).

Steamers brought in tons of foodstuffs on a regular, frequent basis, even during the winter months. Fresh fruits and vegetables, butter, eggs, and cheese were readily available in Skagway, along with such specialties as "fancy" lemons, various coffees (Mocha and Java), chocolate bonbons, celery, cranberries, Japanese and naval oranges, pineaples, and cream cheese. Eastern oysters were regularly imported for Skagway's eating houses, along with fine mackrel from Massachusetts, smoked salmon, and fresh and salt fish.

Numerous butcher shops advertised their wares in the Skagway papers. Laumeister Brothers, "Leading Butchers" situated on Holly



THE PACK TRAIN RESTAURANT
CHRISTMAS DINNER
Skagway, Alaska, Dec. 25, 1899

Extra With Dinner Orders
Lobster Salad, 25c   Chicken Salad Mayonnai
Plate of Olympia Oysters Raw, 25c
SOUP
ream of Celery   Chicken with ric
FISH
Fried Herrings, Butter Sauce
Boiled Salt Mackerel, Egg Sauc
BOILED
x Tongue, aux champignons
Chicken, cream sauce
ENTREES
Veal Kidney saute, on toast
Spaghetti and Cheese, a la Genoise
Fricassee of Chicken
Small Oyster Patties, a la Reine
Compote of Pineapple à la Richelieu
ROAST
Prime Rib of Beef au jus   Leg of Pork with Apple Sauc
Leg of Lamb, currant jelly
GAME
Turkey with Cranberry Sauce.
Roast Tame Duck with dressing
VEGETABLES
Sugar Corn.   Sweet Peas
Steamed and Mashed Potatoes
PUDDING
New York Plum, Hard and Brandy Sauce
DESSERT
Vanilla Ice Cream   Assorted Pies and Cakes
Apples, Oranges, Bananas, Cheese and Cafe Noir
☞ Dinner, from 11:30 a. m. to 8 p. m., 50 cents
Private Dining Room for Ladies and Families.

MOORE CAFE.
SUNDAY DINNER BILL OF FARE
Skagway Alaska.
Soup
Cream of Chicken with Rice.
Salad
Chicken with French Cream Dressing
Fish
Boiled Fresh Cod, Cardinal Sauce
Relishes
Sliced Cucumbers. Young Onions. Pickled New Beets
Boiled
Brisket of Beef and Chile Sauce
Entrees
Chicken Liver Brochettes
Maccaroni and Cheese a la Italliene
Oyster Patties. Peach Charlotte with Lemon Flakes
Roast
Prime Ribs or Beef au Jus. Stuffed Young Turkey
with Oyster Dressing and Cranberry Sauce
Vegetables
Garden Peas. Butter Beans in Cream. Mashed and
Boiled Potatoes.
Pastry and Pudding
California Grape and Lemon Cream Pies. Apple
Snow. Cup Cream Custard.
Dessert
Vanilla Ice Cream with Assorted Cakes
Cheese Crackers Tea Coffee Chocolate

Figure 5.39: The Pack Train Restaurant Christmas Dinner menu and Moore Cafe menu

Sources: Daily Alaskan, 7 May 1899:4; and 24 December 1899:4 respectively.

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Street, employed "the only scientific SAUSAGE MAKER in town. . . Fresh beef, pork and mutton received on every . . . steamer" (Ibid., 7 May 1899:2).

At the height of the boom, meat prices skyrocketed in the Yukon, and enormous profits were to be made by anyone bold enough to drive or ship cattle into the area. One such entrepreneur "purchased a herd of cattle, landed them at Skagway, butchered them, and . . . [sold] meat to the adventurers" (Bearss 1970:199). An article in the May 7, 1899 Daily Alaskan noted that prices of fresh meat would be "higher than ever before known" due to

> the great scarcity of cattle and mutton sheep on the ranges of Eastern Washington and Oregon, from which points have formerly been supplied the summer's meat for the Sound and Alaska. . . . Sheep and hogs are likewise very scarce, consequently very high in the Pacific States (p. 4).

Some suppliers were going to Utah for cattle, and the paper predicted that soon the livestock would have to be imported from Omaha. Some of the meat destined for the Klondike came from even further away. In mid-January, 1900, two hundred sheep carcasses from Australia were shipped into Skagway enroute to Bennett, along with "twelve cases of frozen eastern oysters" (Daily Alaskan, 12 January 1900:4).

Meat imports were both live and butchered. The Alaska Meat Market on Holly advertised the "Choicest of Fresh and Salt Meats, Bacon and Lard. . . We Kill in Skaguay. No Stale Meats" (The Skaguay News 26 August 1898:1). Live beef destined for Dawson and other Klondike gold rush cities was shipped through Skagway by steamer, transported by rail to Bennett, then driven overland to Dawson. For example, early in February of 1900, the local newspaper reported an especially large shipment of goods intended for Dawson, including 200 cattle on the hoof

> six to eight tons of dressed meats, including beef, pork, mutton, poultry and oysters. . . (Daily Alaskan, 1 February 1900:n.p.).

On occasion, meats intended for Yukon boom towns were undeliverable, resulting in a bargain for the residents of Skagway. According to the Daily Alaskan for January 19, 1900 (p. 4), a certain Jack Garr planned to drive 27 head of beef from Skagway, over White Pass to Dawson. However, Garr and the cattle became storm-bound in Skagway along with a large shipment of butchered beef intended for Dawson. The paper also noted that cattle intended for draft animals were storm-bound on the summit of White Pass, and would probably be slaughtered to keep them from starving to death.

A similar case involved 2000 pounds of pork loins sold "cheap" at the Frye-Bruhn company (Daily Alaskan, 16 February 1900:4). One thousand grouse, a wheelbarrow full of frogs legs, and a number of turkeys were peddled at Bennett, just over the White Pass from Skagway, when warm weather threatened to spoil the large stock of goods before it reached Dawson (Daily Alaskan, 27 March 1900:4). Thirty-two hind quarters of beef shipped to Skagway enroute to Dawson was sold at a bargain when it was found the Yukon River was "unfit for freighting" (ibid., 22 April 1900:1).

Comparison of prices of some of the stall-fed beef sold in Skagway shows the proportionate costs for the different cuts:

Beef by the side	8	cents	per	pound
Porterhouse steak	20	"	"	"
Loin steak	15	"	"	"
Round steak	12½	"	"	"
Shoulder	10	"	"	"
Rib	8	"	"	"
Boil	5	"	"	"

This meat was offered at the City Market, corner 5th and State (Daily Alaskan, 7 April 1900:4).

Poultry was also popular with the stampeders. A news note in the Daily Alaskan for May 11, 1899 described the "drove of eighty turkeys and nine geese" that were brought up from Seattle for shipment via the White Pass & Yukon railroad, thence to Dawson (p. 3). However, a later newspaper article indicates that the turkeys were walked over the trail to Bennett, there to be shipped to Dawson (Ibid., 1 January 1900:14).

Milk cows were brought in from Oregon to provide fresh milk for area residents. Orders for milk were to be taken at Laumeister's butcher shop or "at the yards, corner Ninth and State" (Daily Alaskan 23 December 1899:4).

Wild game also provided an occasional source of protein. On March 11, 1899, a mountain goat was shot "within half a mile of town, by Fred Weber" (Daily Alaskan, 1 January 1900:14). In February 1900, another local resident furnished venison for the charter dinner of the order of Red Men; his source for the meat was not listed (ibid. 4 February 1900:4). Other hunters went further afield; the daily paper reported that Messrs. Fred Stevens and Fred Weber returned during the week from a hunting trip to Wrangel (ibid. 7 January 1900:4). Herman Mayer, wholesale and retail butcher with a meat market on Holly Street near State, offered choice cuts of venison as well as beef, pork, mutton, chickens and turkeys (ibid. 24 March 1899:2).

Many of the Dawson restaurants were reportedly serving caribou and moose as a cheap substitute for the expensive beef (Daily Alaskan, 3 February 1900:4). The game was killed "at the headwaters of the Klondike river by professional hunters, and brought down the river on sleds" (ibid. 23 February 1900:1). However, it appears that most of the venison seen on menus in Skagway was not from Alaska, but was imported from such areas as Washington and Oregon.

Some of the food was produced in the Skagway area. Ben Moore kept goats; it is possible that these animals provided both meat and milk for the Moores (Daily Alaskan, 28 April 1900:4). Local truck gardens supplied fresh vegetables such as lettuce, potatoes, peas, onions, beets, rutabagas, carrots, radishes, celery, and turnips for the markets during the summer months. Incipient farming operations at Dyea were established to raise hay, grass, oats, wheat, and potatoes for local consumption (ibid. 12 April 1900:4).

At the height of the Gold Rush, numerous animals such as oxen, horses, mules, and dogs, were shipped into Skagway to provide transport over the trails to the Klondike, and it is possible that occasional bones from these animals were deposited in the dump. For example, it appears from the faunal materials collected from the Mill Creek dump that some of the oxen were butchered and sold for human consumption.

One account notes that on a single day 312 passengers and 106 dogs arrived on the City of Seattle Steamer (Daily Alaskan, 1 January 1900:14). It is likely that spoiled foodstuffs and the trimmings and discards from local butchering activities may have been used to feed Skagway's transient dog population. These bones may also have found their way into the Mill Creek garbage dump after spring cleanup. One local butcher advertised

> Have your garbage removed and keep the town clean and healthy. Lauridson, the garbage man, is equipped for that kind of work. Leave orders or telephone No. 46, Laumeister's Meat Market. All jobs cleaned and disinfected (Daily Alaskan 21 March 1900:2).

Probably at least a few of the dogs brought into the area were pets, intended to serve as companions on the long trail rather than as pack animals. Photographs of Klondikers and the docks at Skagway show numerous dogs of various breeds, many too small and short of coat to serve as pack or draught animals. This glut of animals must have resulted in problems for city authorities; the Daily Alaskan for May 9, 1899 carried the following paragraph on page 4:

> There is a dead dog lying in the center of the street at the corner of Main and Sixth avenue. It is not known how the dog came there, but it will make its presence known unless removed.

Such skeletal remains may well have ended up in the city dump.

Sometimes during the period, cats were also brought into the area, probably as a means of vermin control. Ben Moore acquired--as a pet--a more exotic animal. A young moose captured on Flat Creek about 30 miles upriver from Dawson was taken to Seattle and from there to Skagway. The moose was purchased by Moore, who broke it to harness (Daily Alaskan, 23 March 1900:1).

Description: The following is a description of the animals represented in the Peniel Mission deposits. A total of 1020 bones and shell was recovered in the 1983 and 1985 excavations (Table 5.14). Of these bones, 176 showed evidence of butchering, 376 items were burned or calcined (whitened from burning), and 10 had been gnawed (Tables 5.17, 5.18, 5.19).

The 233 bird bones from the site include domestic turkey (Meleagris gallopavo), and Blue Grouse (Dendragapus obscurus) (Table 5.14). A few bones come from a Canada Goose-sized bird, a chicken-sized bird, and a long-legged bird of unspecified size. The majority of the bird bones (74%) are from indeterminate small birds and indeterminate birds. Much of the bird bone has been broken in tiny pieces, and is heavily calcined. Most of the bird bone, 92% of a total of 233 items, was concentrated in the Gold Rush deposits.

Bivalve shells, including oyster and clam (bivalves, class Pelecypoda), as well as crayfish and fish, totalling 53 items, are included in this collection.

Table 5.17: Modified bone, butchered

TYPE OF ANIMAL	FILL	GOLD	MIXED	POST	STS	STS	F202	UNIT 25D	TOTAL
		RUSH		1900	1983	1985	% 204	DIST	
Game									
bird, cf grouse/grouse size				2					2
deer/cf deer		4						3	7
Domestic Species									0
cattle		2	2	1				5	10
mammal, cow size	1	5	1					3	10
sheep		1	1	1	1				4
swine		6		1	1				8
Unidentified Species									0
artiodactyl	1								1
artiodactyl, large	1	4						2	7
mammal, large	5	37	14	6	1	3	2	37	105
mammal, medium	4	9						1	14
mammal, medium to large	1	3							4
bird, indeterminate		3							3
bird, small, indeterminate		1							1
									0
TOTAL	13	75	18	11	3	3	2	51	176

Table 5.18: Modified bone, burned and calcined

									TOTAL
	FILL	GOLD	MIXED	POST	STS	STS	F202	U25-D	BURNED
		RUSH		1900	1983	1985	& 204	DIST.	& CALCINED
TYPE OF ANIMAL									
Game									
bird, cf grouse/grouse size		40							40
hare, snowshoe		1							1
Domesticated Species									0
cattle		2							2
turkey		2							2
Unidentified Species									0
artiodactyl, large		3							3
mammal, indeterminate				1					1
mammal, large	2	40		3		42		45	132
mammal, medium to large		38							38
bird, indeterminate		150		1					151
bird, small, indeterminate		5							5
unknown bone			1						1
									0
TOTAL	2	281	1	5	0	42	0	45	376
Fish		65				1		5	71

Table 5.19: Modified bone, gnawed

TYPE OF ANIMAL	FILL	GOLD RUSH	MIXED	POST 1900	STS 1983	STS 1985	F202 & F204	U25-D DIST.	TOTAL
Game									
Domesticated species									
mammal, cow size		1							1
Unidentified Species									0
mammal, large	3	2		3				1	9
TOTAL	3	3	0	3	0	0	0	1	10

Eight mammalian species, snowshoe hare (*Lepus americanus*), vole (*Microtus* sp.), black bear (*Ursus americanus*), domestic cat (*Felis cattus*), domestic pig (*Sus scrofa*), mule deer (*Odocoileus hemionus*), domestic sheep (*Ovis aries*), and domestic oxen/cattle (*Bos taurus*) are present in the Peniel Mission collections (Table 5.14). Bones that compare favorably (cf) with wapiti (cf *Cervus elaphus*) and beaver (cf *Castor canadensis*) were also present. Unfortunately, about a third of the mammal bone is too fragmentary to identify as to genus, species, or body part, and was instead classified as unidentifiable bone. Some of the bone could be identified as to body part, but the genus and species were not identifiable; this bone was classed as large, medium, or small mammal bone, or as artiodactyl bone. Over one third of the bone (37%) is highly calcined.

While chances are that a great deal of the bone placed in the large and medium-sized mammal and artiodactyla classifications came from domestic animals like cattle, sheep, and pigs, there is enough identifiable game (deer and possibly wapiti) bone in the collection to prevent positive identification of bone as domestic species. The same is true of the bird bone, where both domestic birds (turkey and possibly chicken) and game (grouse, duck, and other wild birds) are present.

Aside from the unidentifiable, heavily calcined items, the largest single category of bone is that from *large mammals*, totalling 409 items (Table 5.14). The large mammal category includes the following: deer, wapiti, moose, bighorn sheep, mountain goat, pig, cattle, oxen, bear, cougar, seals, and whales (Anderson 1986, Appendix A.4). An additional 17 items come from cow-sized mammal(s), 15 bones are from domestic cattle, 10 are deer bones, 2 are from black bear, 11 from domestic swine and 18 bones from unspecified artiodactyls (total n=482). Another 78 bones come from medium to large mammals. If we assume that the cow-sized mammal bones are from domestic cattle, the large mammal bones that can be clearly attributed to domesticated animals total 110 items. Thirteen items are from game, namely bear, deer, and wapiti. Much of the deer bone has been butchered, but the bear bones show no such evidence. The largest proportion of the large mammal bone, both identified and unidentifiable, came from the Gold Rush deposits and the disturbed strata of unit 25-D.

Fifty-two items could be classed only as medium to large mammals, and another 30 bones, which could not be definitively identified, were listed in the indeterminate mammal category. The collection also includes a total of 28 bones from medium sized mammals and small artiodactyls. According to Anderson the following animals are classed as medium sized: snowshoe rabbit, fox, lynx, wolverine, domestic sheep, beaver, marmot, porcupine. Domestic sheep bones make up a significant portion of the identifiable bone from medium sized animals, and it is probable that the small artiodactyl bone originally came from sheep. Most of the sheep bone was found in the 1985 shovel tests (n=49) and in the Gold Rush deposits (n=10).

All but one of the 50 cat bones in the collection came from the Gold Rush deposits. There are no duplicated elements so these bones probably represent the scattered skeleton of one individual. Eight bones from a hare, probably a snowshoe hare, were found in the trash deposits.

Three cat or rabbit-sized bones were found in the 1900 mixed deposits, as well as the identified medium-sized mammal bones, from a snowshoe hare (n=4), and a beaver (n=1). One of the hare bones was calcined.

Over 200 bones were found in the disturbed deposits of unit 25-D. Their distribution was much like the Gold Rush deposits, with the majority of the items coming from large mammal(s).

Butchering: Appendix A-3 itemizes the type of bone and the meat cuts present for each period (Gold Rush, Post-1900, etc.). A summary of the probable cuts of meat is contained in Tables 5.15 and 5.16. Tables 5.17 through 5.19 show the modifications (burning/calcining, butchering, and gnawing) made to each category of bone. In virtually all but one or two cases--where a knife or hatchet was used--the butchering cuts were made with a saw. Cuts such as round bone steaks and blade roasts were remarkably uniform in cut thickness and length and configuration. These factors strongly suggest that these cuts were made by a professional butcher, and were not home-processed meats.

Beef cuts (and those from cow-sized large mammals) include arm roasts (4), soup bones/boiling cuts (3), blade or chuck roast (2), rump roast (1), standing rib roast (1), round bone steak (3), and blade type steak (6). Two of the beef bones were calcined; 24 of the 32 items recovered showed butchering marks. One item had been gnawed. As can be seen in Table 5.16 the majority of these items came from the Gold Rush deposits.

Three of the 67 sheep bones recovered from the Peniel Mission excavations show evidence of butchering. These cuts are leg of lamb (1), shoulder roast (1), and knuckle bones (1).

A total of 11 pig bones were found in the excavations, most in the Gold Rush deposits. Of these, 8 show traces of butchering. Included are ham hocks (1), picnic ham bone (1), and pieces of shank from a ham (6). One foot bone may have come from pickled pig's feet.

Ten deer bones were recovered. Of these, 7 have been butchered, and include an arm roast (1), a rump roast (1), a soup bone (1), and boiling meat (5). The latter items, portions of a lower leg, may also have been discarded after butchering. It is likely that the single bone that has been tentatively identified as wapiti (cf) was from meat consumed by humans, but it exhibits no butchering marks nor burning.

Two of the 45 game bird bones (grouse) exhibit knife cuts, and 40 of the bones are heavily calcined. All but 3 of these bones came from the Gold Rush deposits. Only 5 domestic turkey bones were found; 2 are calcined. One duck bone is included in the collection also, but it shows no trace of either burning or butchering.

Several other categories of animals (unidentified artiodactyls and large- and medium-sized mammals) also exhibit butchering marks. The large mammal cuts, itemized in Table 5.16, include blade roasts (1), boiling meat (5), portions of a rib roast (6), rib steak or roast (4), an unidentified type of blade roast (1), heel of round (1), short ribs (boiling meat, n=7), blade bone steaks (8) and round bone steaks (12). Artiodactyl bones include 1 round or arm roast, 1 rump roast, 3 blade bone steaks, 1 round bone steak, and 1 steak or chop. Butchered bones from medium-sized mammals include a blade roast (1), short ribs (2), rib roast (1), shoulder roast (1), blade bone steak (1) and round bone steaks (2).

Discussion: There are two basic distribution patterns associated with artifacts and faunal materials found at the Peniel Mission site. Contents of the dump are assumed, with the exceptions mentioned above, to have been primarily food refuse from an unknown source, probably from both commercial establishments and private residences. Some of the bone, particularly the bird bone, was evidently burned before deposition in the stream bed; however, some of the rest of the bone may have been scorched in situ by trash burning.

During the cleaning process, butchering remains from locally procured game and birds would probably have been deposited in the dump separately from the food bone. Normally, small animals such as rabbit, duck and other game birds tend to be eaten whole or only partially disarticulated more often than are large animals, and more whole pieces of the different game/bird bones would go into the dump. In other words, people buy whole birds but only parts of cows. From the lack of certain bones normally discarded during the butchering process (foot bones, bovine heads, etc.) it appears that the creek bed was not being used to dispose of major amounts of cattle, hog, or sheep butchering waste.

Bones in the post-1900 sheet trash probably resulted from dispersed garbage, butchering remains (primarily game and birds), food bone given to dogs and other pets, intrusive remains, etc. These deposits would tend to be more incidental, and more randomly distributed in space than the earlier deposits.

The assortment of different food animals represented in the collection is rather modest, numbering about seven species in all. The bone that can be identified by species is primarily from domesticated animals, with smaller proportions of game animals. It is possible that some of the grouse and water fowl were killed in the Skagway vicinity, but, judging by the contemporary newspaper ads and columns reviewed earlier, it is likely that much of the food items, including game, were imported from far outside the immediate area. It is possible also that the snowshoe hare and the beaver were locally hunted food sources. However, since they have no butchering marks, there is no solid evidence to link them directly to human consumption except the calcination of one hare bone. These bones may well have been brought in by carnivores or washed in during flooding. They also may have been part of the normal "background noise;" that is, these bones may have been from the skeletons of animals that died in the area. Almost certainly the vole, and possibly, the cat bones fall into this latter category. Intrusive faunal remains may occur in cultural features that are "potential shelters or natural traps" (Jolley 1983:68). Historic photographs show that Mill Creek had a sharp bend just below the Peniel site, behind the Moore cabin. During high water, this bend would tend to accumulate tree limbs and trash which could provide shelter for small animals, and the deposited trash and tree limbs would tend to trap washed-in remains.

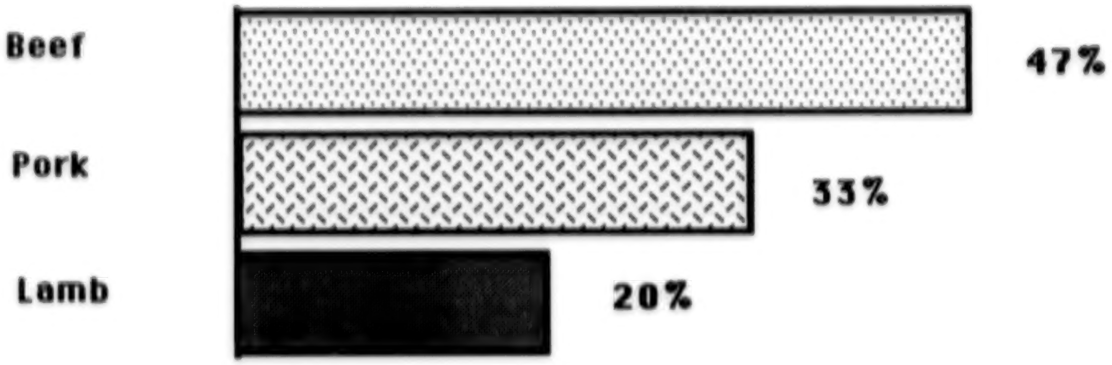
Unquestionably, the overwhelming majority of the animal bones came from domestic species imported into the area. These bones were brought into the Skagway area in several forms--as live animals, and as wholesale or retail cuts. Generally wholesale cuts would have been dressed halves, quarters, or more specialized bulk cuts like loins, rump, etc.

The sheep bones in the collection include a few skull and lower leg bones. This suggests that at least some of the animals were raised in Skagway or brought into the area live, then butchered here. Similar remains are reported for domestic swine. However, since the hogs' feet and head may also be consumed (roast pig, pig's head, pig's feet/trotters), it is impossible to tell whether the animal was butchered in Skagway or if these items were imported.

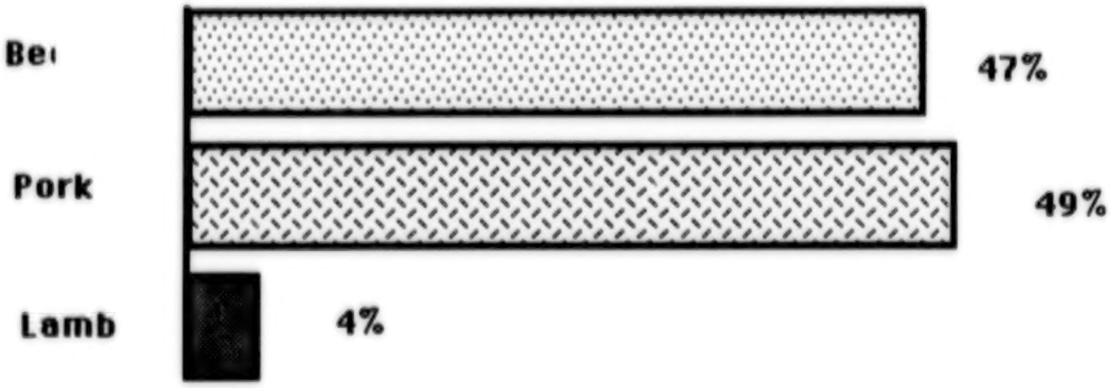
Of the butchered bone, the majority of items were from large and medium-sized mammals. Beef was the most popular of the identified species showing *butchering* activities (n=20), followed by pork (n=8), venison (n=7), and lamb or mutton (n=4). Examination of the *butchered and unbutchered* domesticated animal bone in the Gold Rush period deposit shows a total of 14 domestic cattle or cow-sized large mammal bones (47%), 10 sheep bones (33%), and 6 pork bones (20%). These proportions are somewhat different than typical turn-of-the-century meat consumption (Figure 5.40). Until the middle of the twentieth century, Americans preferred pork over all other meats. Department of Agriculture statistics for 1900 show the proportion (by weight) of dressed meats slaughtered in the United States was 47% beef and veal, 49% pork, and 4% lamb (Figure 5.40) (U.S. BOC 1976:521). Harris (1985:119) notes that in 1900

> there was still a 4.8-pound-per-person advantage in favor of pork, and as the twentieth century wore on, the difference increased until on the eve of World War II Americans were back to eating 18.6 pounds more pork per person than beef.

In some areas, particularly the South and Midwest, pork was considered the "staff of life" (Harris 1985:115). Pigs convert corn to fat about five times more efficiently than do cattle. Pork was easier to can and preserve, and was more versatile in its use and produced more by-products. It was not until the 1950s, with the inception of backyard barbeques and fast foods, that beef consumption in the United States exceeded that of pork. Why then does it *appear*, based on the rather limited selection, that more beef than pork was consumed in turn-of-the-century Skagway? The difference may be attributable to several factors. Obviously, some pork products such as sausage, bacon,



Relative proportions of beef, pork, and lamb (butchered) in the Gold Rush deposits



Relative proportions (dressed weight) of animals butchered in 1900 in the United States

Figure 5.40: Comparison of faunal materials; Gold Rush deposits and American meat consumption, 1900. (U.S. Bureau of the Census 1976:521)

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canned pork, etc. would leave few traces in the archeological record. Other factors also may have influenced the choice of meat products in Skagway. Beef appears to have been "more abundant in the California market than any other type of meat" (Hittell 1882:268 quoted in Schulz and Gust 1983:47). The open ranges of the west were infinitely more suited to beef raising, resulting in heavy beef production and consumption in this region, the primary source for the Alaskan consumer.[1] Skagway's merchants prided themselves on their cosmopolitan selections, and their advertising stressed continually that the goods were of the very highest quality. It may well be that beef was considered more desirable than pork, regardless of price or availability.

Figure 5.41 shows the proportions of meat cuts from all animals. Note that in this small sample the proportions of roasting cuts, steak, and boiling cuts for the Gold Rush period are fairly even, with smaller amounts of butchering debris and specialty meats. Unfortunately the cuts that can be directly attributed to beef, mutton, or pork are too few to provide an adequate sample for comparison.

Summary: A good variey of meat, including exotic game items, was available to the residents of Skagway. A little more than a third of the bone was burned, and a tenth butchered. Most of the identifiable bird bone was burned. Large mammal bone from domesticated animals, particularly beef, accounted for the largest proportion of the identifiable bone. Meat was brought into Skagway both as live animals and wholesale and retail carcasses. It appears the meat was professionally butchered. Roasting meats slightly outnumbered other cuts.

These culinary remains are not characteristic of the sort of foodstuffs that would have been packed over the trails to the Klondike. Rather, they reflect Skagway's growing similarities to other established

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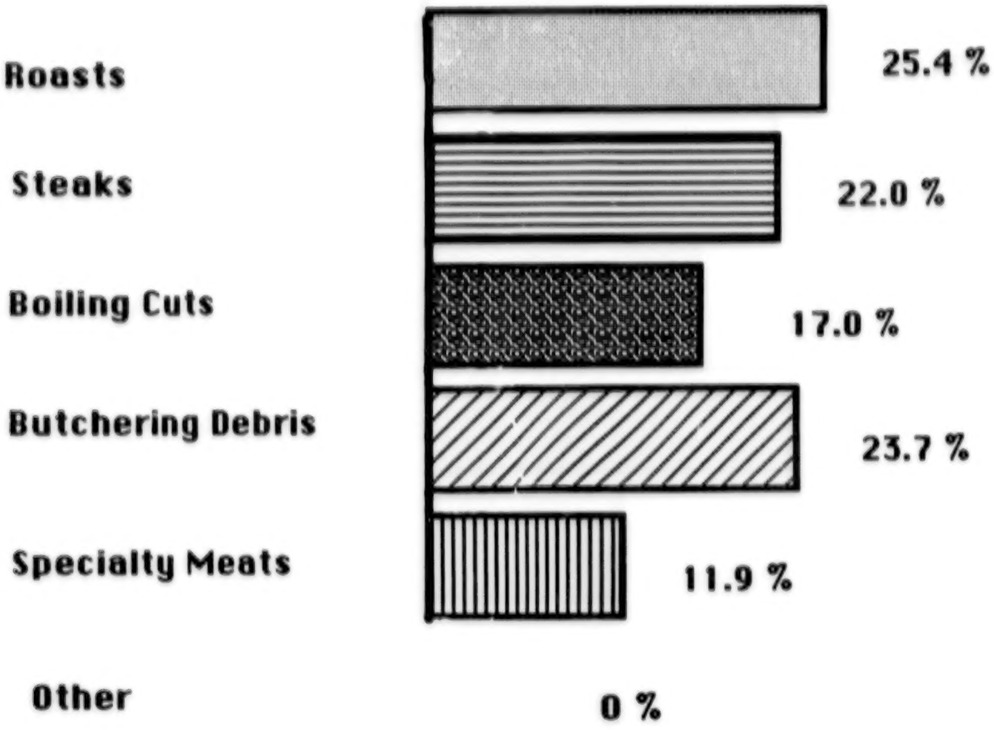
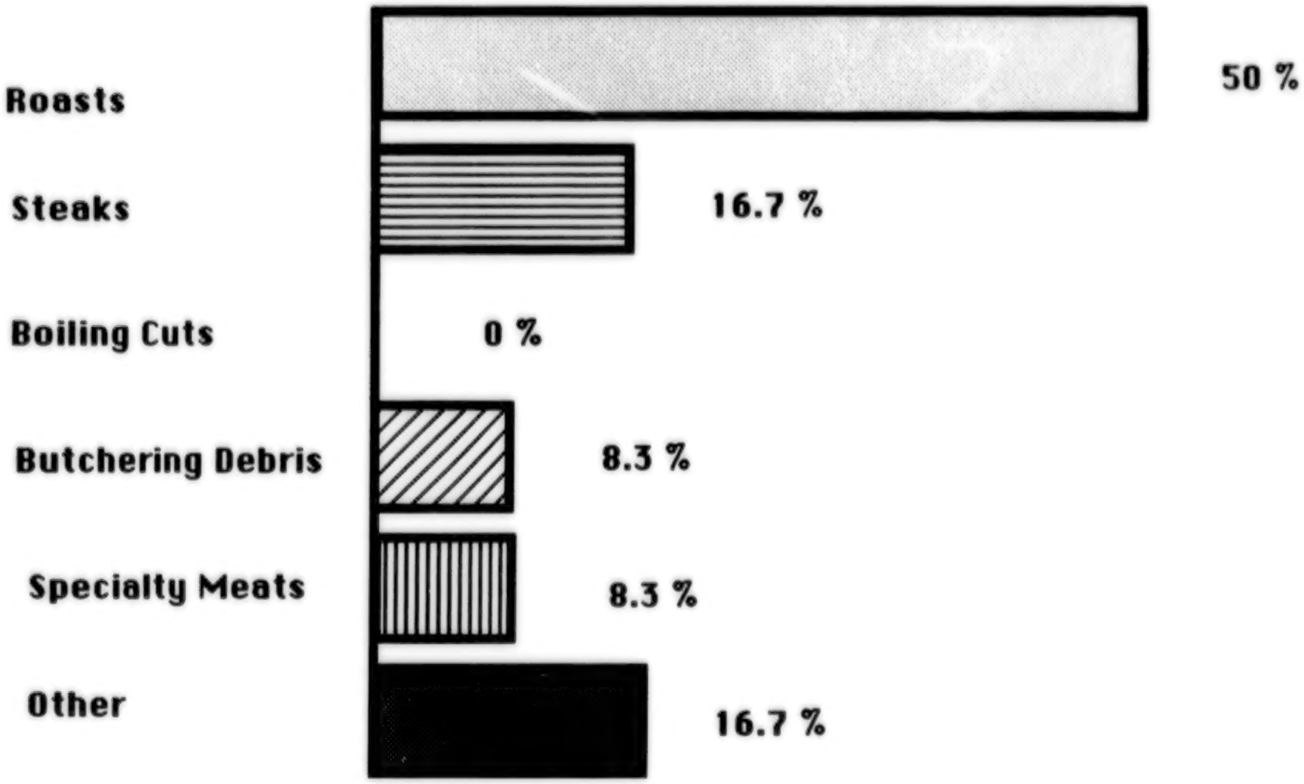
[1] Harris (1985:117) states that Americans' preference for beef originated in the Great Plains.



Meat cuts, Gold Rush deposits (N = 59)



Meat cuts, Post-1900 deposits (N = 11)

Figure 5.41: Meat cuts, Peniel Mission excavations

transportation and distribution centers in the lower 48 states, areas where a wide variety of foodstuffs and the wherewithal to acquire them were readily available.

FOOD SERVING CLASS

The food serving class includes all items generally associated with the serving and eating of food. For example such table service items as bowls, plates, tumblers (drinking glasses), cups, saucers, and eating utensils are included in this category. Pressed, etched, and cut glass sherds are assumed to be part of the food serving class unless they have been identified otherwise.

The majority of the items in this class are ceramics. These items are classed by their ware type (based on an analysis of ceramic paste and manufacturing technique), and where known, their function. Each category is subdivided by decorative techniques and patterns. Standard terminology is used to define the various ceramic classes. These terms are defined in Figure 5.42. A complete inventory of the serving class is included in Appendix A-4 and a summary of the items can be found in Table 5.20. The ceramic sherds in the inventory of serving items in this appendix are catalogued by ware (porcelain, whiteware, ironstone, earthenware, and stoneware), decorative style (e.g. polychrome underglaze decal), and sherd type (body, rim, curved vessel base, etc.).

The sherds were also sorted by vessel type where the function was readily apparent; i.e. cup, plate, bowl and so forth. However, for most items, very general categories such as "curved vessel base, curved vessel rim, body sherd, etc." were used. Examination of illustrations of 1890s dish sets makes it very clear that a large number of items were included in each set, and that many of the dishes in the set were quite similar in morphology. For example, Berge (1980:178) illustrates 31 different vessel shapes and types of pottery--all but a few of which were curved vessels. Advertisements in the Skagway newspaper show a wide range of items that may have had similar shapes:

> Dinner Sets Toilet Sets Fish Sets Fruit Sets Salad Sets Cake Plates Bone Plates . . . Sugar & Cream Sets (Daily Alaskan, 10 September 1899:1).

PORCELAIN, STONEWARE, WHITE-BODIED WARES, AND MISCELLANEOUS EARTHENWARES

Based on paste (body) color material, degree of vitrification, opaqueness, and type of glaze, four basic categories of ceramics have been established for this collection:

Porcelain: A hard, completely vitrified, refined ceramic of kaolin-based pastes that breaks in a conchoidal fracture. Body texture and color may range from a pure white, smooth, close-grained translucent glassy looking paste, to a coarse, granular, blue-gray material. Decorative techniques used on porcelain include handpainting, decalcomania, transferprinting, molded designs, and application of gilt. " Chinese Export" porcelains are thick-bodied wares with a granular grey-blue to white paste, usually decorated in a hand-painted underglaze blue design of a Chinese or pseudo-Chinese motif (Blee et al. 1986:92).

Stoneware: A dense, opaque, heavy, highly vitrified pottery with a "smooth stone-like appearance" (Blee et al. 1986:92). Firing temperatures and impurities in the clay combine to create a range of paste colors from white to buff to grey or brown (ibid). Although the stonewares are impermeable to liquids, they are often glazed with salt, slip, or alkaline glazes (Worthy 1982:337). Stonewares are usually thicker and coarser bodied than earthenwares; they are most often used for storage and utilitarian containers.

Yellowares are a coarse bodied ceramic, ranging in color from buff to brownish-yellow, generally used for sturdy utilitarian articles such as mixing bowls. Made of stoneware clays, this ceramic type falls somewhere between stoneware and earthenware, dependent upon the firing temperature and final vitrosity. Clear alkaline glazed yellowware was most often decorated with annular (multi-colored bands) or mocha designs (Goodwin et al 1983:107).

White Bodied Wares: This category includes a variety of ceramics whose paste color and texture ranges from a smooth white to a granular appearing, grey-white. These wares vary widely in porosity and hardness (white-bodied stonewares are not included in this category). Those items designated whitewares have a permeable body with a somewhat granular texture and an irregular breakage pattern. A transparent alkaline or lead glaze is commonly used on the opaque whitewares which are easily subject to crazing and cracking. These wares were commonly decorated with transfer printing, hand-painting, edge banding, and decalcomania.

Developed in the mid-nineteenth century, Ironstones are a refined earthenware with a very hard, often granular appearing white to "cold grayish-white color" paste covered with a clear to opaque glaze (Price 1979:11). Ironstones characteristically are thicker than the other whitewares. Decoration normally consisted of molded designs (Blee et al. 1986:92). Sturdy undecorated ironstones, commonly known as "hotel ware" were popular in the late nineteenth and early twentith century (ibid).

Also included in the white-bodied wares category are those highly vitrified, opaque ceramics sometimes known as semi-porcelains ("porcelaneous stoneware"). These ceramics may be thinner, whiter, and finer than the utilitarian ironstones. For purposes of this report, they have been lumped with the ironstones. Some late examples of semi-porcelains have a pastel colored body (Worthy 1982:337).

Miscellaneous Earthenwares include brown glazed wares with a cream-colored body and glazed and unglazed redwares. Brown-glazed ceramics with a cream colored body are porous and poorly fired; they are fragile and break irregularly. Body color of the redwares may range from a dark red-brown to orange to pink due to the presence of iron in the clay (Goodwin et al. 1983:106). These fragile wares are fired at low temperatures, making them fairly light and porous. Unglazed redwares are often used for utilitarian dry storage and for decorative furnishings such as flower pots.

Decorative Techniques for Ceramics

Transferware (Transfer printing) was first used in the 1700s, but was most popular during the 1800s. Until 1830, most transfer printing was done in blue; after this time other colors such as red and brown were added, as well as polychrome transfers by about 1840 (Price 1979:19; Berge 1980:199). The transfer printing process involved transferring designs from an inked copper engraved plate to transfer paper and thence onto unfired ware (Blee et al 1986:93).

Decalcomania, a decorative technique first introduced in the 1860s to "open the market of the middle class to polychromed tableware," (Berge 1980:200; became quite popular by 1900 (Wegars 1981:121; Goodwin et al. 1983:112). Designs to be used on the wares were printed with special inks on a prepared backing paper which was coated with glue. When the backing paper was applied to the ware and moistened, the paper could be removed easily, leaving the design on the vessel. Decals made it possible to decorate ceramics in a much wider variety of colors, shading, and tones than did transferprinting. When compared with transfer prints, decal designs are much sharper and distinctive, and filled-in colors stayed within the bounds of the outlines of the motif (Berge 1980:200). Unlike transfer prints, the decal was usually applied over the glaze, although there were exceptions to this rule.

Hand-Painted wares are vessels on which the decoration is painted by hand rather than applied by means of transfers, decals, or stamps (Blee et al 1986:93). Handpainted designs can be applied both underglaze and overglaze. A variety of specific types of decoration can be recognized within this category, including annular, finger-painted, peasant, and gilded wares. Peasantwares were whitewares whose simple motifs, usually floral, were handpainted in bold brush strokes in bright colors (Berge 1980:201-202). These wares, which "appeared on the market from 1810 onward," were produced cheaply to appeal to "the lower income family" (Berge 1980:201).

Gilt decoration utilized small amounts of a metallic overglaze paint, usually gold, copper, or silver, to highlight designs, edge vessel rims, or spatter-paint surfaces of ceramics. It was most often used over the glaze. Gold gift banding is especially common on late nineteenth and early twentieth century ceramic wares.

Annular decoration consists of horizontal bands of color running around the ceramic. First used during the eighteenth century, this technique was still used on late nineteenth-century whiteware and yellowware bowls. By the twentieth century, the annular decoration was largely restricted to yellowware (Blee 1987).

Figure 5.42: Ceramic ware types and decorative techniques

Table 5.20: Summary of food serving artifacts

FOOD SERVING GROUP	FILL	GOLD RUSH	MIXED	POST 1900	STS 1983	STS 1985	U-25D DIST.	F202 & F204	TOTAL
Whiteware									
undecorated									
plain, undecorated	47	515	34	62	3	120	188	19	988
undecorated ironstone	8	108		2	1	4	17	0	140
decorated whiteware									0
transfer prints	9	100	4	8		32	24	0	177
hand painted	0	2		1		0	1	1	5
decalomania	0	21	2	1		0	13	1	38
mold decorated ironst	0	2				0	0	0	2
mold decorated ww	0	7				0	0	0	7
miscellaneous	0	2	1	3		0	1	0	7
gilt trim	5	8	1			0	13	0	27
Porcelain									0
undecorated	2	8		7	1	2	3	0	23
handpainted	1	10	2		1	0	13	0	27
gilt trim	0	4				0	0	0	4
mold decorated	0	0		1	1	0	1	0	3
decalomania	5	6				0	3	0	14
miscellaneous	0	0		2	1	0	0	0	3
Earthenware									0
cream bdy/brown glaze	0	4			0	1	0	0	5
redware	3	0	3		0	0	4	0	10
yellowware	1	1			0	0	1	0	3
pink body	4	0		0	0	0	0	0	4
spall	0	2		0	1	0	0	0	3
Stoneware	0	0		1	0	0	0	0	1
Glassware									0
cut/etched	0	0		1	0	3	1	0	5
molded/pressed	5	24	4	2	3	13	40	0	91
tumbler/goblet	0	12			0	1	5	2	20
Utensils	0	2		1	0	0	0	0	3
TOTAL	90	838	51	92	12	176	328	23	1610

Because nineteenth-century ceramics sets had so many functionally different items with similar configurations, and because these items are from a sampling of a much larger collection, the artifacts were placed into rather simple categories. That is, for the most part, the sherds were sorted by body sherds, rims, and bases. In some obvious instances, the sherds were further subdivided into plate/platter/saucer base, rim, etc. (Appendix A.5).

Gold Rush Food Serving: As can be seen in the artifact inventory and the summary of food serving artifacts (Appendix A-5 and Table 5.20), the majority of sherds found in the Gold Rush period deposits are undecorated whitewares and ironstones, comprising 74% of the ceramics found. A little over half (52%) of the 1,610 ceramic sherds and serving glass sherds recovered during this testing project come from the creek dump area.

While no whole vessels were found in the Gold Rush period strata, several partial items, identifiable to vessel type, were located here. These include fragments of cups, plates, saucers, goblet(s), and tumblers. Partial cups include a gilt banded whiteware (Figure 5.43k), two whitewares with molded decoration (Figure 5.44a and b), along with one plain undecorated item (Figure 5.45). The smaller, more finely made items were probably part of a tea or dinner set, while the single plain cup may have been sold as hotel ware.

It is unclear whether the partial, undecorated white cup (Figure 5.45) was made with a handle; handleless cups of an identical shape and general size, known as St. Dennis cups, are described in Herskovitz's discussion of the material culture of Fort Bowie (1978:100). The cups found at Fort Bowie were, however, of military issue; no such markings are present on the cup found in unit 25-B. "Vitrious hotel china, . . . warranted not to crack" shown in period catalogs includes "3 Tea Cups and Saucers, without handles" for $1.38 (Montgomery Ward 1969:530). The hotel china cups sold by Wards appear to be very similar to the one found in the Peniel excavations.

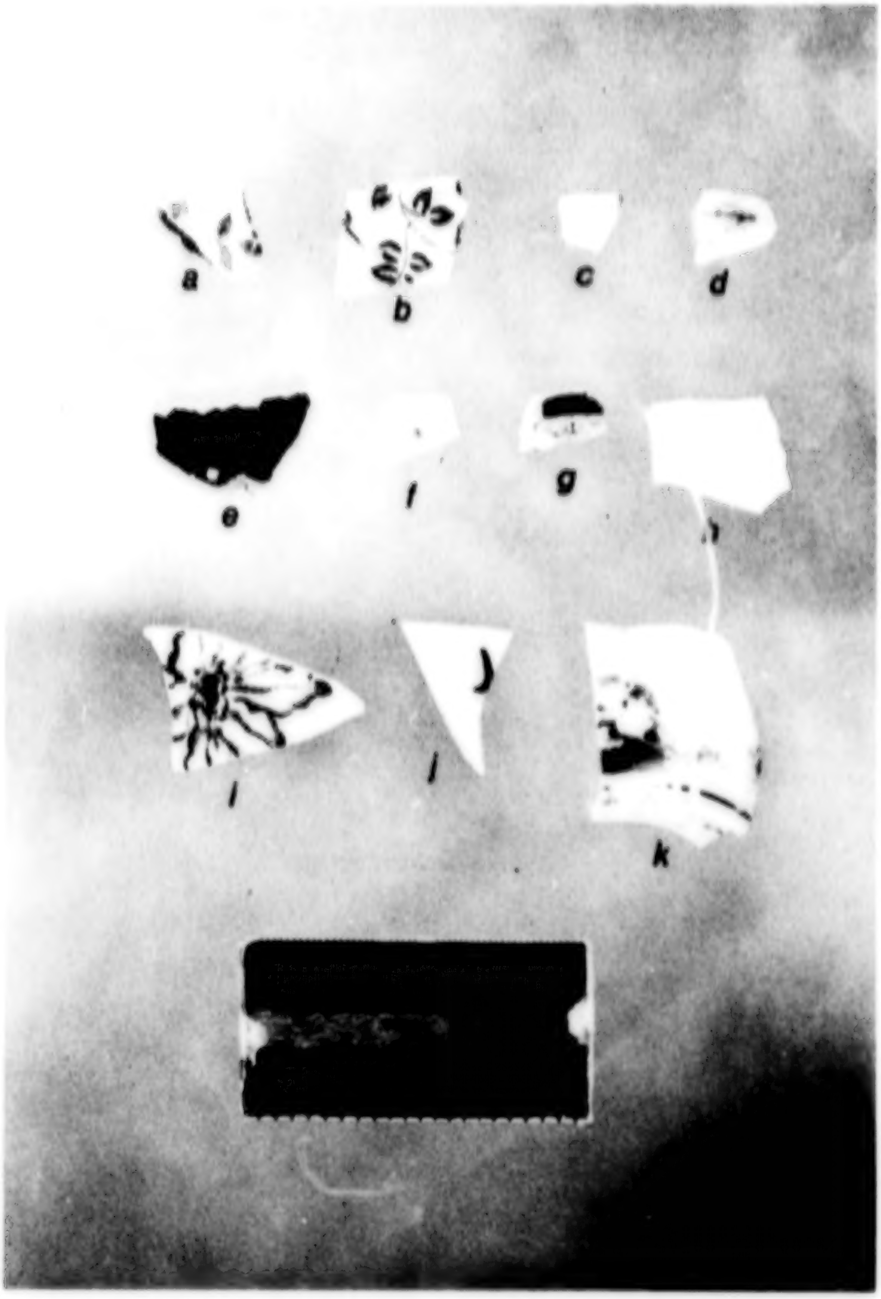


Figure 5.43: Miscellaneous ceramic sherds

a. whiteware body sherd, handpainted underglaze polychrome floral
b. whiteware rim sherd, polychrome floral transfer
c. whiteware base sherd, green transfer print partial maker's mark reads ". . . HLT. . ." or . . .HLI. . ."
d. porcelain base sherd, teacup or small bowl. Decorated with faded red/pink overglaze enamel
e. redware body sherd with dark brown lead glaze, overglaze gilt floral trim
f. porcelain body sherd, overglaze decal
g. whiteware body sherd, brown glaze
h. whiteware rim sherd, tan underglaze rim trim
i. whiteware body sherd, turquoise underglaze floral decal
j. porcelain body sherd, green handpainted floral overglaze
k. whiteware base sherd with gilt trim

Figure 5.44: Mold decorated whiteware teacups

Figure 5.45: Undecorated whiteware cup

The partial base of a small, undecorated whiteware bowl was found in unit 25-A. The Gold Rush collection also includes a number of miscellaneous undecorated whiteware or ironstone vessel rims, bases, and handles, etc.[1] Thin bodied, ceramic tea and dinner sets were less common than the more ornately floral decorated "semi-porcelains", but the plain wares could easily be purchased through the Sears or Ward's catalogs.

Several partial plates/saucers are included in the collection--two are of undecorated ironstone, one of undecorated whiteware, and one (Figure 5.46a) is a transfer printed whiteware. The thick, heavy ironstone plate, measuring approximately 8 inches across, was probably chosen by a commercial establishment for its low cost and its durability.

Decorated wares found in the trash deposits include a molded whiteware saucer found in the Operation 21 test trench C. This brown floral transfer-printed saucer has a partial maker's mark on the reverse; beneath a leafy garland the mark reads . . . ROS . . . [BROS? ROSE?] While no maker was found for this saucer, it is typical of some of the transfer printed wares produced during the period. For example, the Ward's catalog for 1895 lists Ravenna Pattern china with "a neat border design of pansy flowers and leaves in a light brown color . . . . priced nearly as low as plain white ware" (Montgomery Ward 1969:526).

The Gold Rush collection contains several items with a basal logo; some have identifiable maker's marks (Figures 5.47 through 5.52). Four of the marks on whiteware sherds are probably from the Meakin potteries, England. The first of these (Figure 5.47) appears to be the mark used by CH[arles Meakin] on wares from his Hanley, England pottery from

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1. Several large, heavy, curved vessel sherds were classified as Furnishings because their general morphology and colorful decoration suggested they were part of a chamber set; i.e. a washbowl, pitcher, or chamber pot (commode) rather than from dinnerware.

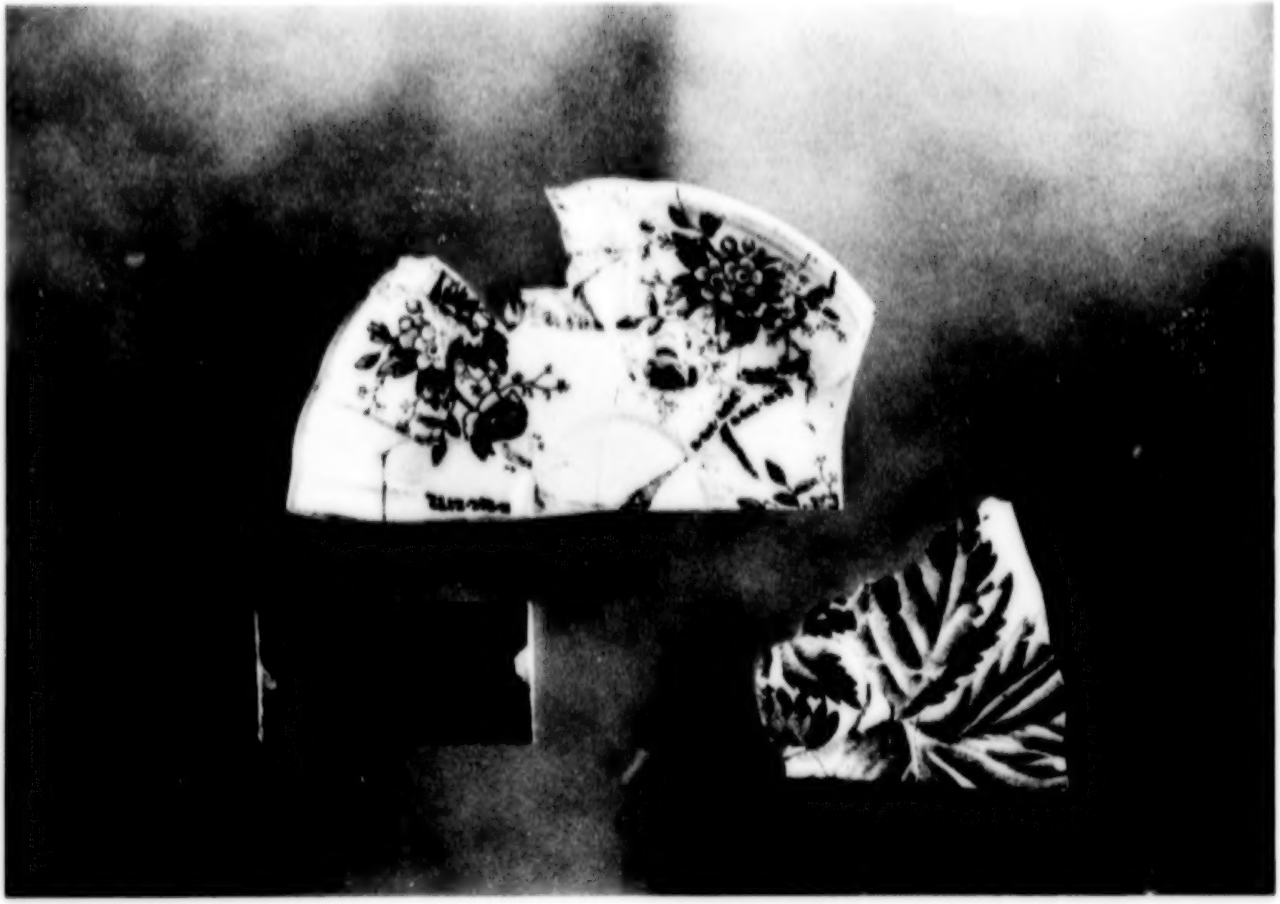

Figure 5.46: Sherds from two patterns of brown transfer floral printed whiteware a) saucer b) body sherd

about 1883 to 1889.[2] The logo includes the ubiquituous Royal Arms mark featuring a lion and a unicorn on opposite sides of a simple quartered shield. Note that the words "HONI SOIT QUI MALY PENSE," characteristic of the Royal Arms mark, are partially visible on this item. This mark, originally used by British china makers for their finest wares, was copied by foreign firms during the nineteenth and twentieth centuries.

The Royal Arms mark was also found on two plate base fragments from test trench 21B.F; these artifacts mend with a third from TT 21C.F. The second item, marked ". . . MEAKIN/ . . . NLEY / . . . GLAND" also used the Royal Arms mark (Figure 5.48a). The Royal Arms mark found on both of the above items is the post-1837 version (Godden 1964:552).

There were several Meakins (Henry, Harry, and J&G) operating in Hanley, England, during the late 1800s and early 1900s. The small sherd shown in Figure 5.48c reading "[ME] A[KIN]/[HAN]LEY / [ENG]LAN [D]" may have come from one of the Meakin Companies in Hanley, but there is not enough of the lettering left on this small sherd to be sure.

The words "SEMI . . ./ENGLA. . ." appear on a small whiteware sherd in blue transfer print. This may have originally read "SEMI-PORCELAIN / ENGLAND" (Figure 5.49b). Another fragment of whiteware has a green transfer-printed mark reading "IRON. . ." [IRONSTONE?] (Figure 5.49c).[3] Another ironstone plate is shown in figure 5.52a.

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[2] Earlier Meakin wares bearing a similar mark were produced at Burslem from 1870-1882 (Godden 1964:426).

[3] The terms ironstone and semi-porcelain were used to describe a variety of ceramics; see Figure 5.42 for definitions of these terms.

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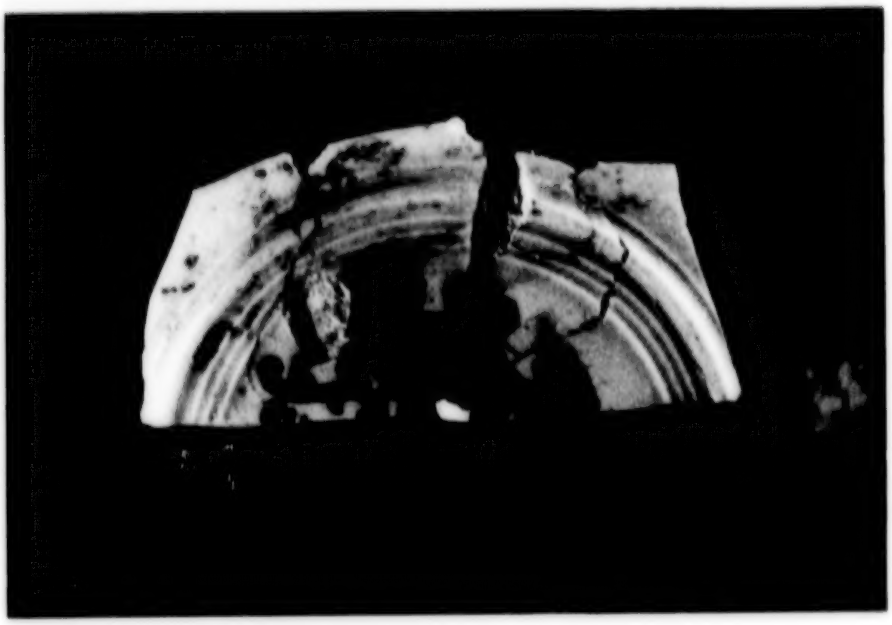

Figure 5.47: Royal Arms maker's mark, C.H[Meakin]"?

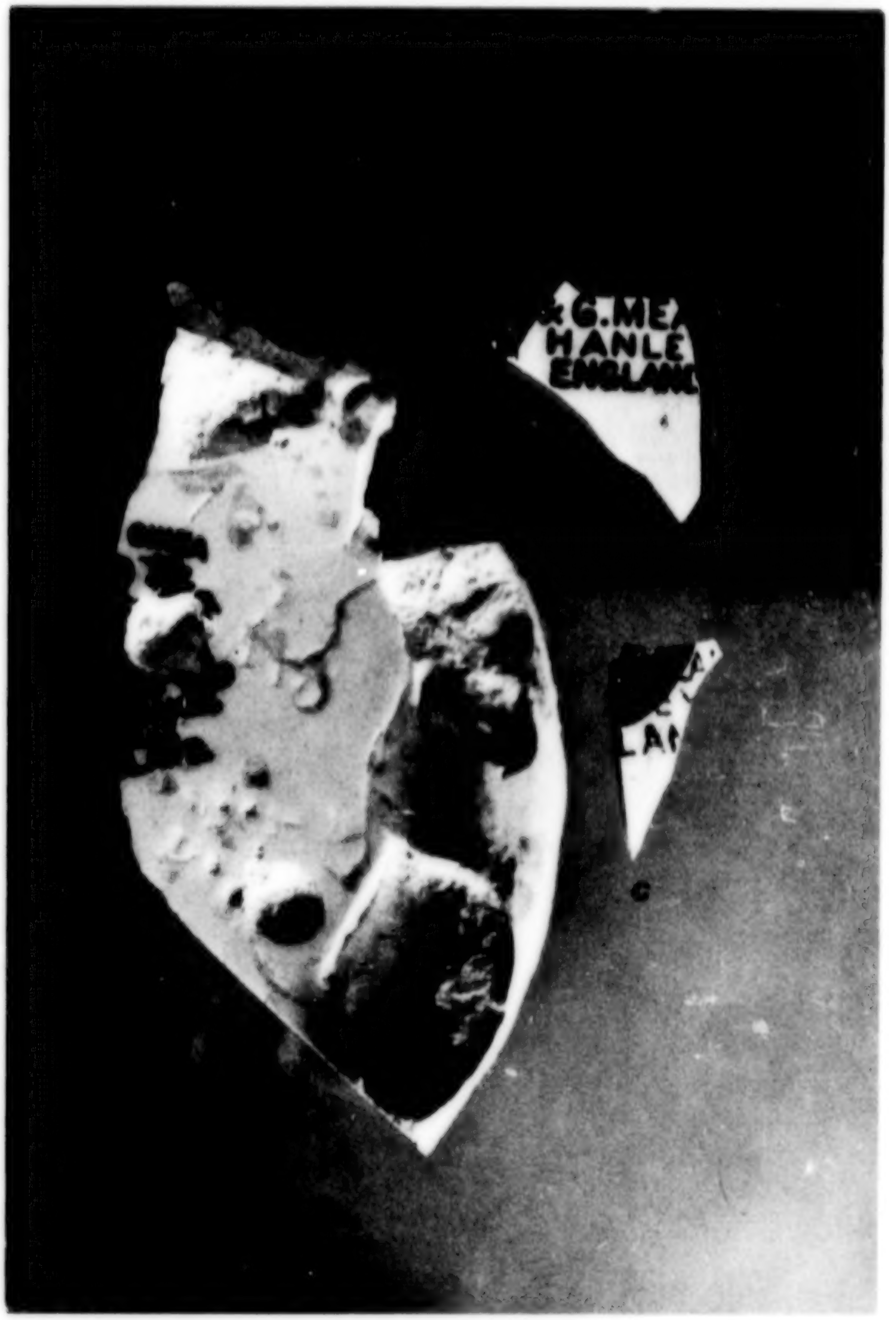

Figure 5.48: Maker's mark, Meakin, Hanley, England
a. ". . . CHINA / MEAKIN / . . NLEY / . . GLAND"
b. ". . . & G. MEA / HANLE. . ./ ENGLAND"
c. ". . AY / . . . EY / . . . LAN. . ."

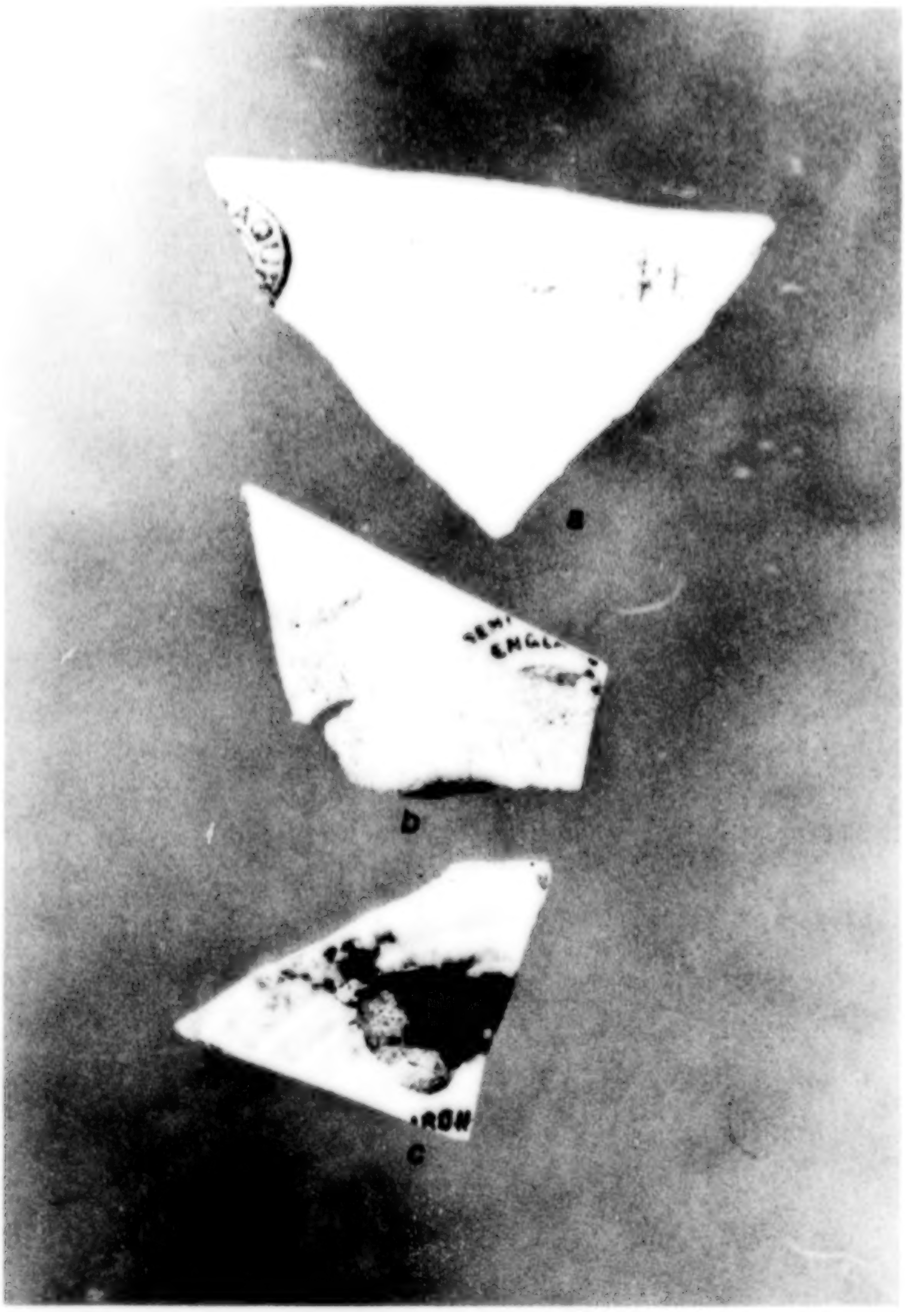

Figure 5.49: Maker's marks, whiteware
a. ". . .AQUE"
b. "SEMI . . . / ENGLA. . ."
c. "IRON. . ."

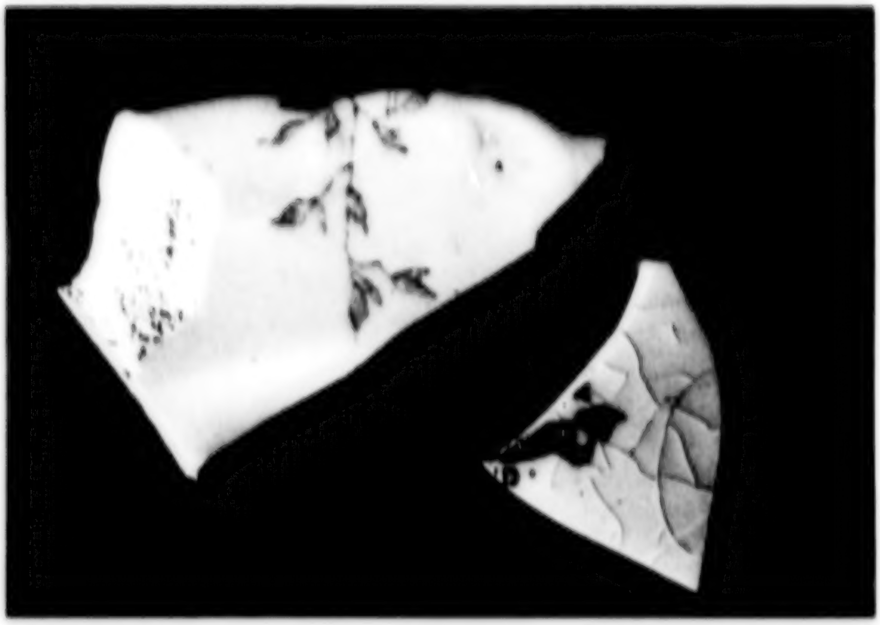

Figure 5.50: Floral print whiteware plate with partial maker's mark, . . . ROS/D. . .

Figure 5.51: Unidentified Royal Arms maker's mark on whiteware plate/platter base reads" . . . TED / K. / TE"

Figure 5.52: Royal Arms Maker's Mark
a. ironstone plate base sherd, makers' mark
b. ironstone plate base sherd, makers' mark

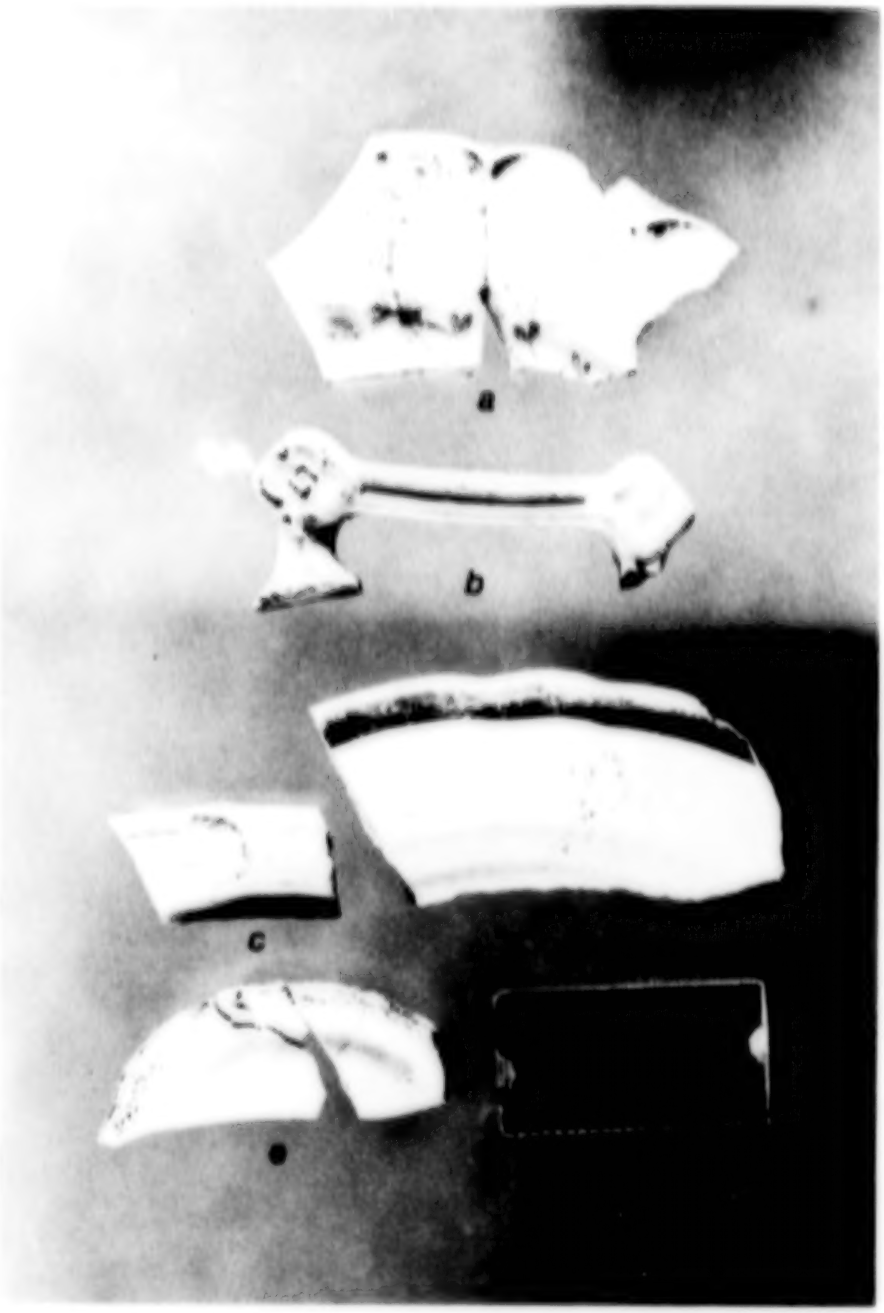

Figure 5.53: Miscellaneous whiteware sherds

- a. whiteware rim sherd with polychrome overglaze floral decal and gilt trim
- b. whiteware handle with overglaze gilt trim
- c. whiteware rim sherd with gilt overglaze trim
- d. whiteware rim sherd with gilt overglaze trim
- e. whiteware base sherd with gilt overglaze speckle trim

Numerous rim and base sherds, most from plates or saucers, were found in the Gold Rush period trash. Figure 5.53 illustrates examples of gilt trimmed whiteware. The Montgomery Ward catalog for 1895 advertised a design called the "Daisy Gold Band Tea and Dinner Set." These dishes had a "superior granite body, heavily gold banded" (Montgomery Ward 1969:531). Item d in Figure 5.53 appears to be fairly similar in design. Item 5.53c, a heavy gilt-trimmed rim from the Gold Rush period trash deposits in unit 25-D, mends with a rim sherd from stratum A of the same excavation unit. This supports the determination that areas of this unit were disturbed by post Gold Rush period excavation.

Of the decorated whitewares, brown floral underglaze transfer prints account for the largest proportion of the items (43%), followed by blue transfer prints (27%). Transfer print decorated wares were popular throughout the nineteenth century. Evidently these wares were readily available in Skagway, for a one line advertisement in the Daily Alaskan for March 17, 1899 suggests customers "See the blue and white ware at Allen's, Broadway" (p. 2.).

Decorated whitewares were not, however, limited to gilt trimmed or transfer printed items. Some of the varied whiteware patterns are illustrated in Figures 5.43, 5.50, 5.53, and 5.54. Many of the sherds are decorated with decals in a floral design (both over and underglaze), and/or rim banding of gold or tan. A few items are handpainted.

Several multi-colored decal-decorated porcelain and semi-porcelain rims and body sherds from this period are shown in Figure 5.54. A wide variety of similar items is illustrated in period catalogs; these are almost uniformly an open floral pattern. Decals were applied both under and over the glaze; the underglaze decal tended to be more durable, and, because it required more handling, more expensive. According to Goodwin et al. (1983:118) the median date for decal decorated wares is 1925.

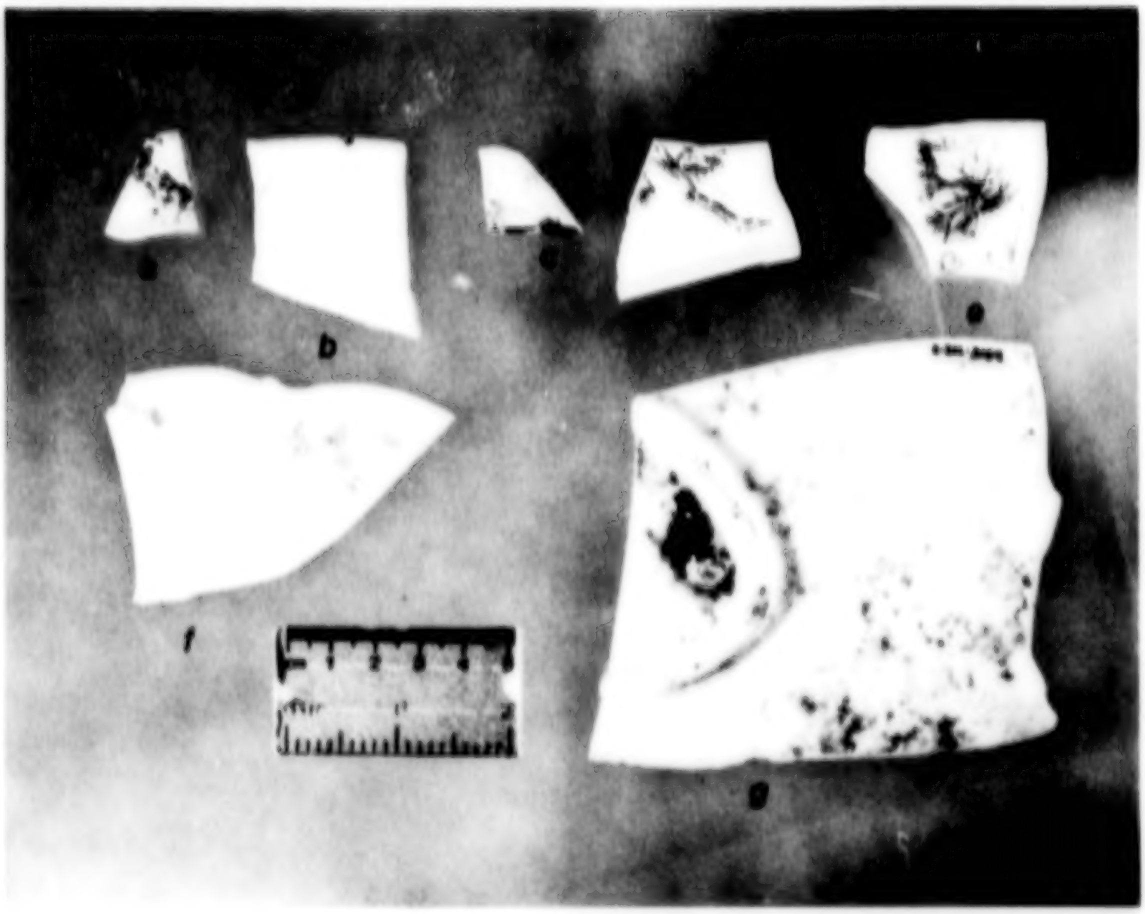

Figure 5.54: Assorted porcelain and whiteware patterns

a. porcelain body sherd with underglaze polychrome floral decal
b. porcelain body sherd with overglaze polychrome floral decal
c. porcelain body sherd with overglaze polychrome floral decal
d. porcelain body sherd with overglaze polychrome floral decal
e. porcelain body sherd with overglaze polychrome floral decal
f. ironstone rim sherd with molded scalloped edge and pastel polychrome floral underglaze decal
g. ironstone base sherd with oval foot ring. Same pattern as f.

Fragments of Chinese export porcelain were found in several units and shovel tests across the site (Figure 5.57). These attractive sherds include several pieces from a large footed bowl. Other fragments of the same or similar pattern are from a smaller item, possibly a cup. Most of the sherds are handpainted in a floral pattern. The paint was applied both over and under the glaze, and individual designs were touched up with gilt overglaze. Several other sherds are handpainted in a floral overglaze design.

Miscellaenous sherds from unit 25-B include a plain, undecorated brown glazed whiteware, and a thick whiteware decorated with yellow and white annular bands. The brown glazed whiteware may have been from a special item like a pitcher, creamer, or teapot. Berge (1980:188) indicates that brownware with a cream-colored body was usually from an ornamental piece that was pressed into a mold while in a plastic state. The yellow and white patterned sherds probably were fragments of a utilitarian item like a mixing bowl.

Tableware: Fragments of a ferrous serving spoon and a partial knife blade were found in the Gold Rush period excavations, along with a piece of a ferrous metal pan. These items are too corroded to determine much more than general shape.

Glassware: The discriminating nineteenth century hostess could choose from a wide variety of glass items to set an elegant table. These vessels include pressed, etched, and cut glass tumblers, condiment dishes, bowls, pitcher/tray/tumbler sets, cream and sugar and salt and pepper sets, syrup pitchers, table casters and vinegar and oil cruets, finger bowls, and candle stick, celery, and toothpick holders (Montgomery Ward 1969:535-545; Sears Roebuck 1976; n.p.).

A minimum of nine different styles of pressed and cut glass came from the Gold Rush period collection. These sherds vary in thickness and curvature, and include fragments of tumblers and large serving vessels, along with a number of unidentified pieces. Pattern names, and

Figure 5.55: Assorted whiteware patterns
a. whiteware rim sherd, black underglaze floral transfer print
b. whiteware body sherd, blue underglaze floral transfer print
c. whiteware body sherd, blue underglaze oriental motif transfer print
d. whiteware body sherd, blue underglaze oriental motif transfer print
e. whiteware body sherd, blue underglaze oriental motif transfer print
f. whiteware rim sherd, blue underglaze oriental motif transfer print

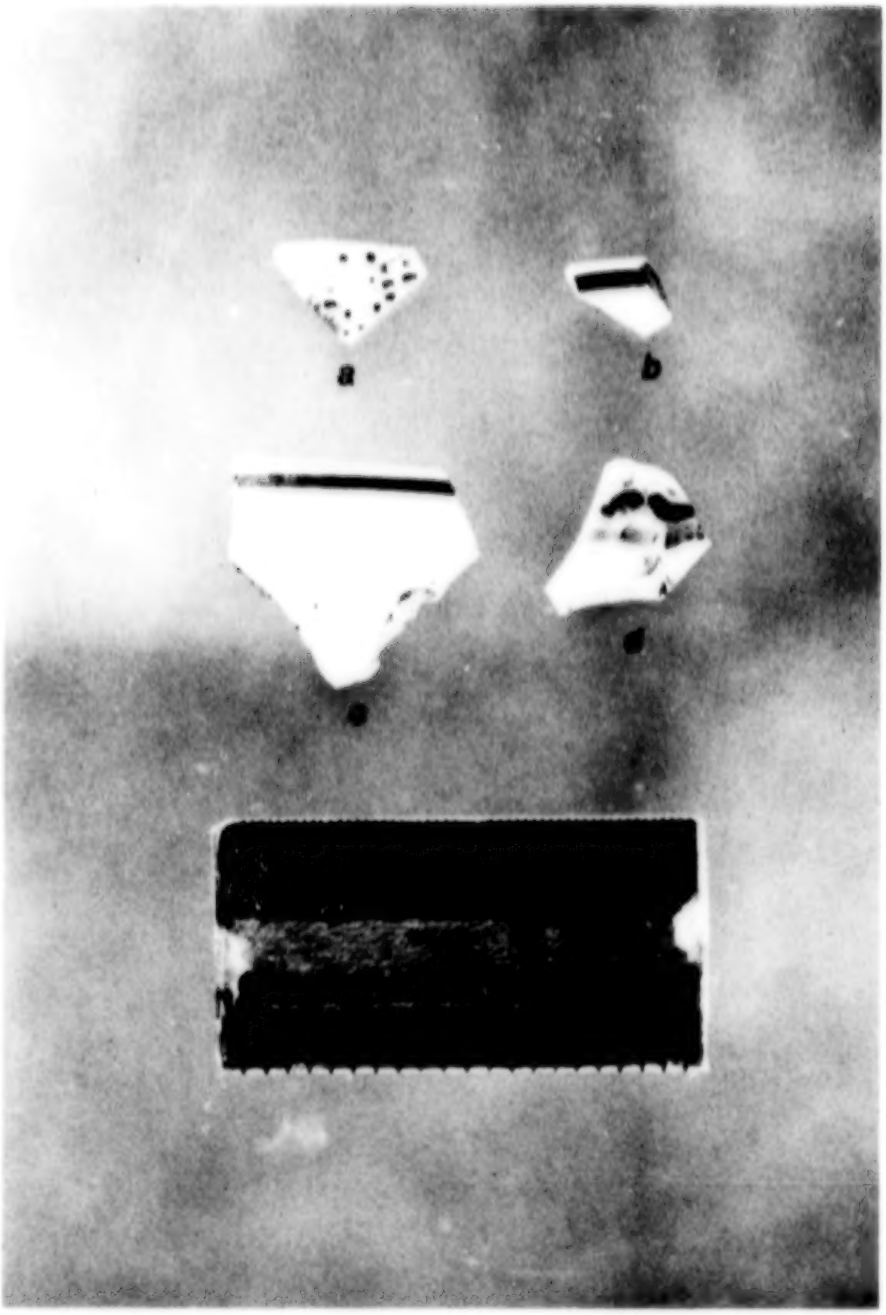

Figure 5.56: Assorted porcelain and whiteware patterns
a. randomly incised porcelain body sherd
b. whiteware rim sherd with dark green trim
c. whiteware rim sherd with edge trim
d. porcelain body sherd with hand painted floral overglaze trim

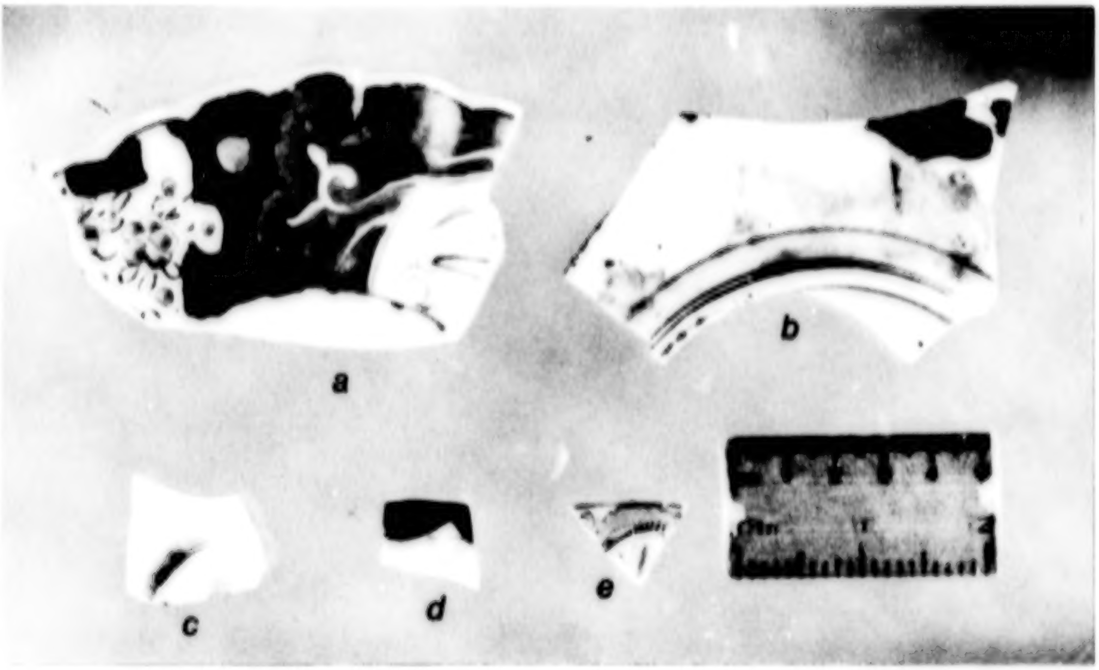

Figure 5.57: Handpainted Chinese Export porcelain

pictures of the overall design and of the glassware can sometimes be found in patent records. However, in this case, the patent records were not searched because it is such a time-consuming process, and because most of the recovered sherds are too small to determine the extent/type of pattern, or the size, shape, or function of the original piece.

Most of the glass serving items in the Gold Rush collection are of pressed glass. Glass manufacture by pressing was one of the technological innovations of the period 1820-1860. Pressed glass is actually a form of cast glass with the molten glass "being gathered and cast in a mold" and shaped by the press of the plunger (Davis 1949:82-83). One of the several varieties of pressed glass found in the Gold Rush period excavations closely resembles the "Czarina" crystal pattern illustrated in the Montgomery Ward catalog for 1895 (1969:538) (Figure 5.58e. f, and g). This pattern is described as

> An exact imitation of the celebrated strawberry diamond and fan genuine cut glass pattern, which came into prominence during the World's Fair. The shapes are very pleasing and novel.

A tapered, hexagonal pressed colorless glass goblet stem was found in the lower levels of excavation unit 25-B (Figure 5.59d). This item resembles the "very fine quality clear crystal glass, extra strong stem" cocktail glass sold by Montgomery Ward (1969:546).

Several of the sherds found were from clear glass tumblers. Molded clear glass tumblers suitable for table use and/or for jellies, some with tin tops, were a common item in period catalogs (Montgomery Ward 1969:542).[4]

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[4] The majority of these items have been included with the Food Storage Class.

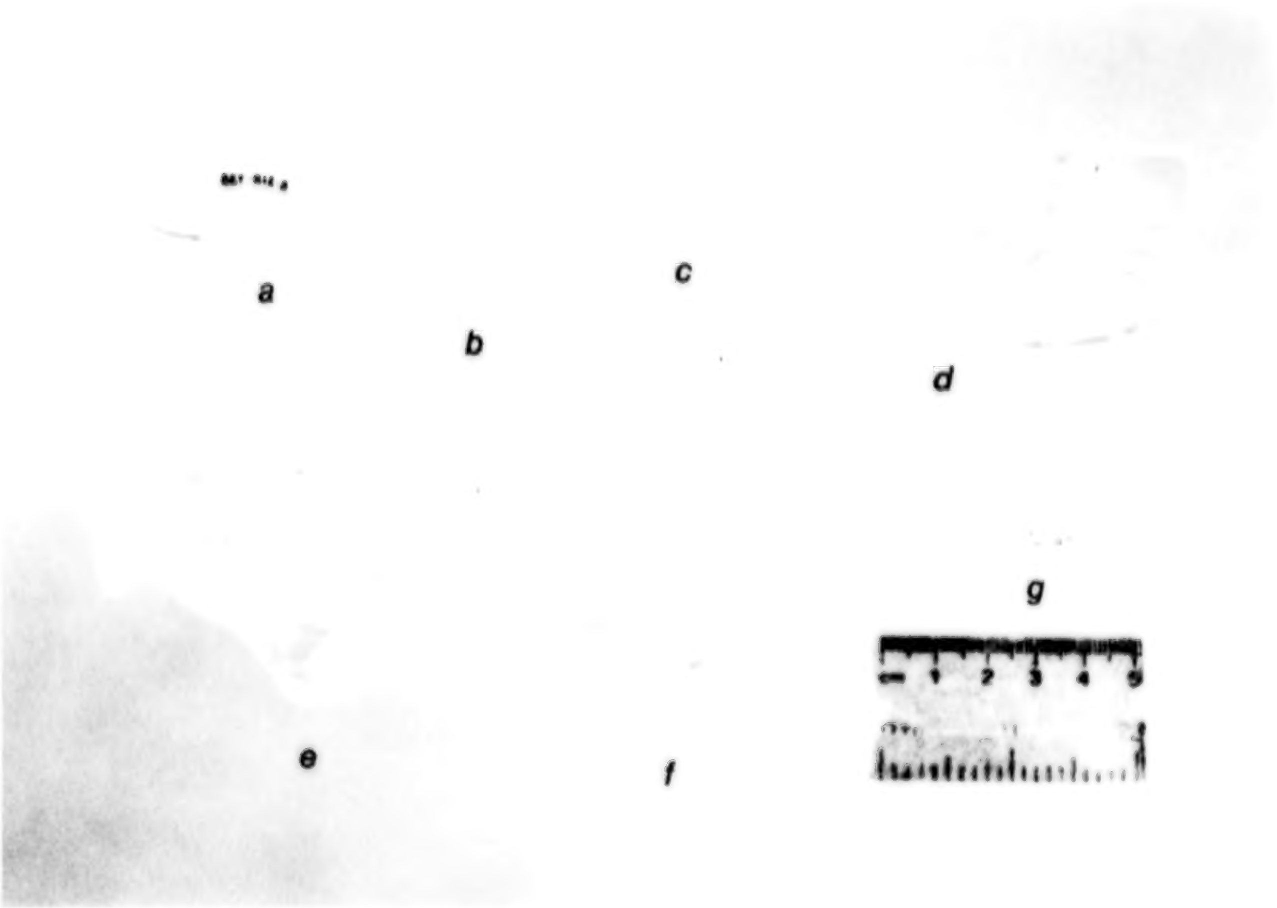

Figure 5.58: Assorted pressed glass sherds

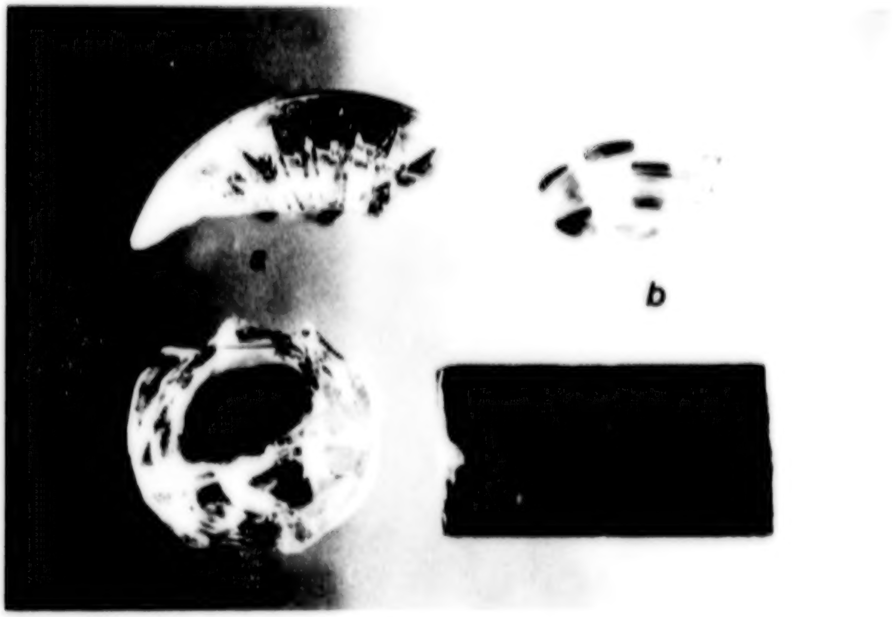

Figure 5.59: Colorless glass tumbler base fragments

Several other heavy clear glass tumbler bases were found in the Gold Rush period excavations. These are illustrated in Figures 5.59b and c, and 5.60e, along with a plain rim from a heavy tumbler (5.60d). While this type of tumbler was often sold as part of a water or lemonade set that usually included a pitcher and tray, tumblers could also be purchased separately. These were usually sold by the dozen for a wide variety of special uses such as water, lemonade, cider, soda water, ale, whisky, brandy, and sherry (Montogomery Ward 1969:542, 546).

Mixed Deposits Food Serving: A total of 51 food serving artifacts came from the mixed deposits. Two-thirds of these items were undecorated whiteware sherds. Decorated whitewares (n=8) included four transfer prints, a gilt trimmed item, two decal decorated pieces, and one miscellaneous sherd.

There were two pieces of handpainted porcelain, three redware sherds, and four pieces of pressed glass.

Post-1900 Food Serving: Again, two-thirds of the serving pieces (n=92) come from plain, undecorated whitewares (Table 5.21). The majority of the remaining items came from transferprinted whitewares (n=8) and undecorated porcelain (n=7).

Only one piece of cut glass was found; this delicate starburst design (probably from a tumbler) came from excavation unit 25-A. This design was popular during the late 1920s and early 1930s.

Excavation Unit 25-D.Distriburbed Food Serving: Most of the items found in this disturbed context are similar or identical to ones found in the trash deposits throughout the site, and none of the serving artifacts appear to date much later than the turn of the century.

Ceramics: Like the Gold Rush deposits, the largest proportion of ceramic items (63%) consists of undecorated whitewares. Decal decorated and transfer printed items run a close second, with about 16% of the

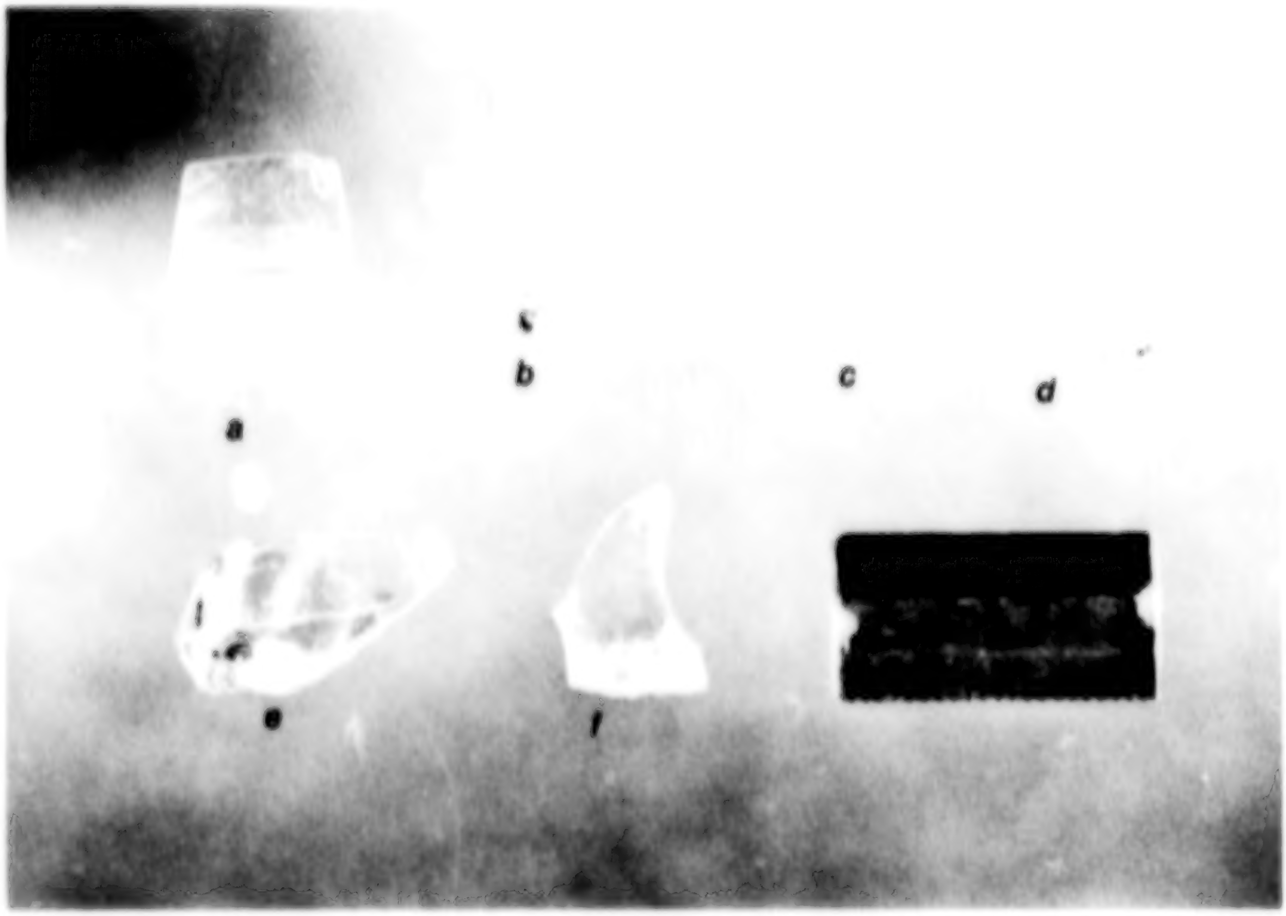

Figure 5.60: Assorted colorless pressed glass tumbler bases and rims
a. impressed band decorated rim
b. impressed band decorated rim
c. impressed band decorated rim
d. plain smooth rim
e. heavy clear glass tumbler base
f. heavy clear glass tumbler base

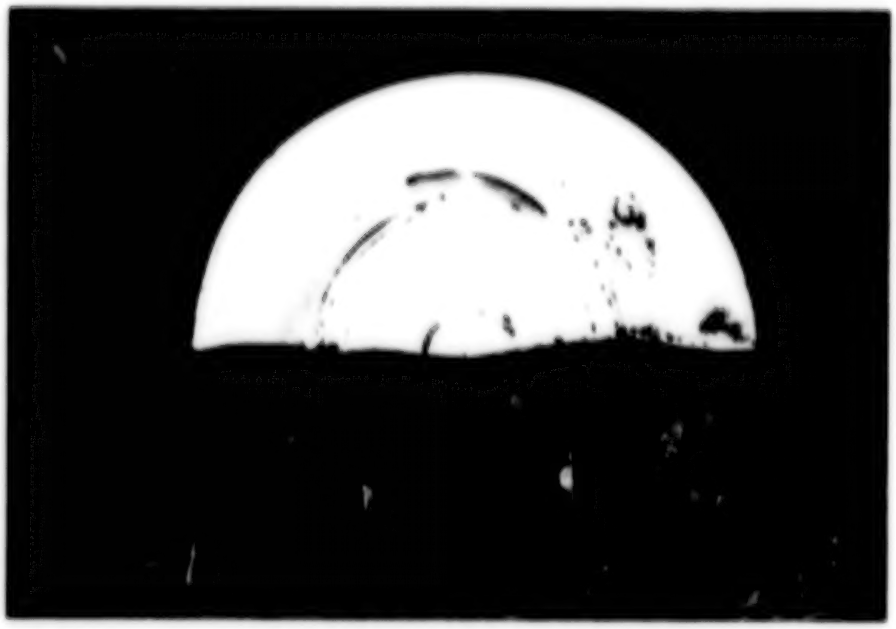

Figure 5.61: Partial porcelain saucer; handpainted polychrome and gilt overglaze

sherds. The modest number of porcelain sherds includes a partial porcelain saucer (Figure 5.61). The saucer design is handpainted over the glaze in a pink, blue, yellow, and red floral pattern. Gilt overglaze trim is used around the center, the rim, and on some of the leaves. This item does not have a maker's mark. It may have been a "fancy Japanese Plate . . . tinted and decorated in a very artistic manner" or another of the many special cup and saucer sets sold during the 1890s (Montgomery Ward 1969:533).

Several ceramic sherds with partial maker's marks were found in this stratum. However, the marks were too fragmentary to cast any light on the name of the maker or the date of production. One of these, found on the base of a small round container (Figure 5.52) has a portion of the Royal Arms mark with the word ". . . ONSTONE C. . ." [IRONSTONE] just above. Another has the letters ". . .PAQUE. . ." in a circular design (Figure 5.49a). This may have read "OPAQUE" as in "OPAQUE PORCELAIN". Porcelains are normally translucent while earthenwares are opaque (Godden 1964:13). It may be that the manufacturer used this term to give the cheaper whitewares more of an edge in advertising. It appears this term was widely used during the nineteenth century. For example, C. Meigh and Sons used it on their wares from 1851 to 1861, and it was still in use around the turn of the century; e.g. the Fleming Company of Glasgow used the term in their impressed and printed marks from 1900 to 1902 (Godden 1964:158, 429).

A tiny base sherd found in unit 25-D has the words" . . . ONE CHIN" [BONE CHINA] printed in blue. According to Godden (1964:11), use of the words "Bone China" indicates a twentieth century date. Two of the rim decorated items (Figure 5.56b and c) found in the upper levels are reminiscent of the simple decorated wares widely used in restaurants during the early portion of the twentieth century.

Fragments of a gilt-trimmed redware with brown lead glaze were found in the upper levels of unit 25-D. These curved sherds may have come from a tea pot or other serving item. One small fragment of yellowware came from excavation unit 25-D, and several pieces of pink bodied, pink glazed ware were found in excavation units 25-B and 25-D. One of the pink-bodied sherds has a silvery luster trim on the scalloped rim border.

A faded floral printed whiteware sherd has the word ". . . ROS. . . / . . . D. . ." on the back (Figure 5.50a and b). This may have stood for " _____ BROS, ENGLAND".

This disturbed stratum contained some pieces of transfer printed and decal decorated ceramics. Some of these ceramic sherds are illustrated in Figure 5.54d and e.

Several types of ceramics were included in a "miscellaneous" group. These ceramics include two pieces of a plate or saucer decorated with a wide, tan colored band under the glaze on the rim. Gilt trimmed ceramics (whiteware and porcelain) were also found in this stratum. Two of these items are illustrated in Figure 5.53b and e.

Glassware: Portions of the base, stem, and lip of a clear glass wine goblet were found in this stratum (Figure 5.62b-d). These sherds appear to be very similar to the fragmentary clear glass goblet from the Gold Rush period strata in excavation unit 25-B.

Shovel Tests Food Serving: The base of a small curved vessel was found in shovel test 29-1. This whiteware artifact may have been either a small bowl or large cup. A portion of a maker's mark, ". . . & G.MEA / HANLE / ENGLAND" on an item found in shovel test 29-A (Figure 5.48b) suggests it was part of a vessel made by the J&G Meakin Company in Hanley, England after 1896.[6] Another whiteware item found in this same test reads only ". . . TED / K. / TE" (Figure 5.51). The printed

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[6] The word "England" was added to marks from 1891 to comply with the American McKinley Tarrif Act (Godden 1964:11).

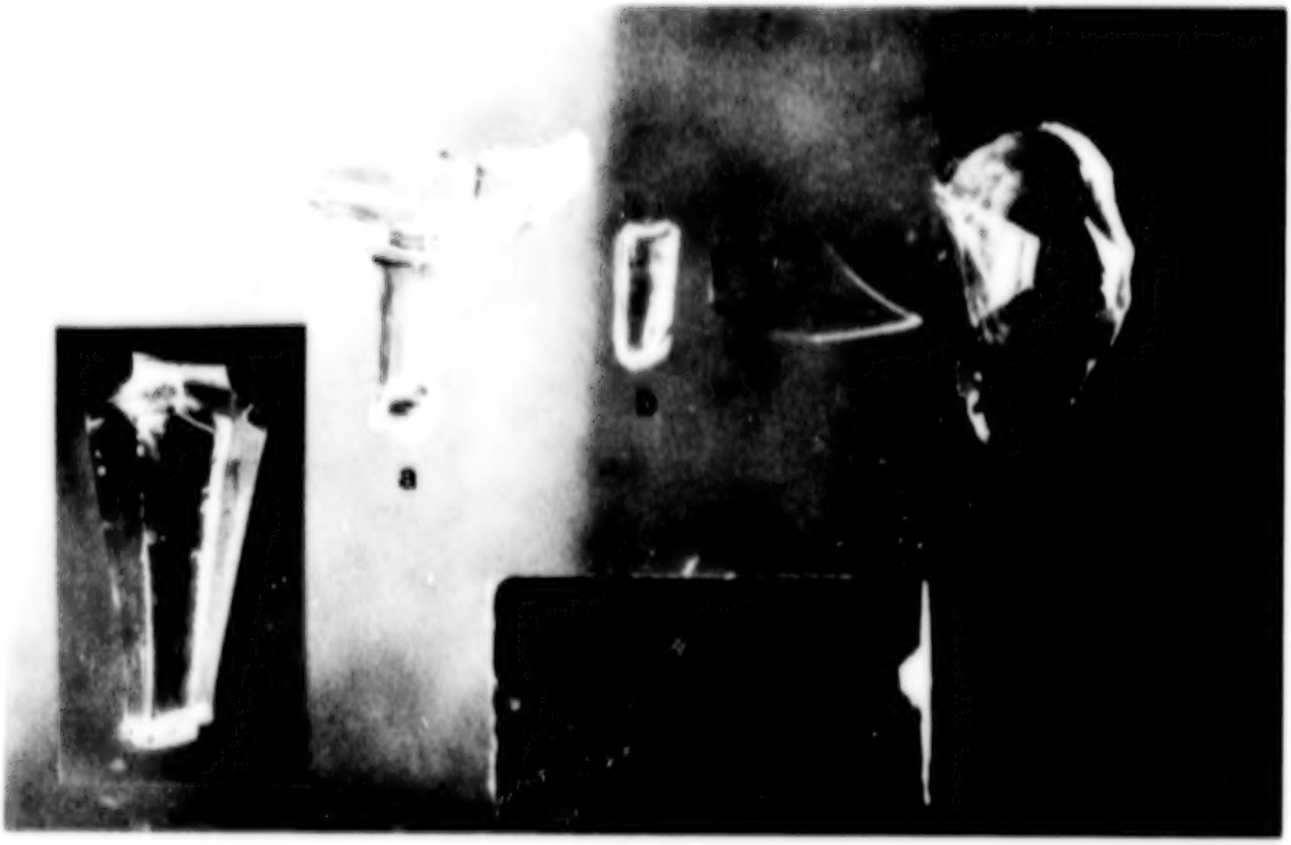

Figure 5.62: Fragments of colorless glass goblet
a. goblet bowl and portion of stem
b. portion of stem
c. portion of goblet bowl
d. portion of goblet base
e. portion of stem

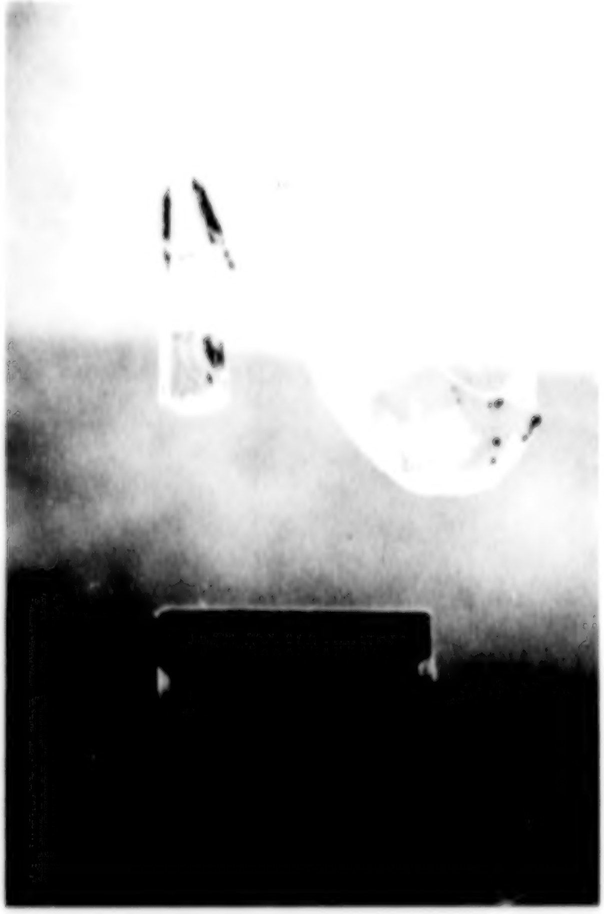

Figure 5.63: Colorless thin curved glass sherd, decorated in frosted floral pattern

logo is nearly illegible but may be part of a Royal Arms mark. The Royal Arms mark also appears on another small sherd from this test, but there are no other identifying marks or letters visible.

Glassware: Several pieces from an etched clear glass tumbler have a smooth rim; the floral design appears frosted (Figure 5.63). Fragments of a tumbler with the same design were also found in excavation unit 25D.D.

Heavy pressed glass, similar to that in the Gold Rush period deposits, was found in several of the shovel tests.

FURNISHINGS CLASS

The furnishings and housekeeping artifacts are itemized in Table 5.21.

Gold Rush Furnishings: Part of a rusty ferrous hat or coat hook was found in unit 25-B (Figure 5.64). Both faces of this flattened cast hook are decorated with a geometric design. On the vertical portion of the piece, the decoration consists of raised dots inside raised edge bars. The cross piece is decorated with raised diagonal bars that run into the parallel raised edges. A nearly identical item is shown in the 1895 Montgomery Ward and Company's catalogue no. 57 (1969:382) where item no. 41860 is described as "Hat and Coat Hooks, bronzed iron, a very neat pattern."

A number of fragments from large, heavy whiteware and ironstone (semi-porcelain) vessels were found in the Gold Rush deposits. These include pieces of large vessels such as commodes and pitcher and bowl sets. Several pieces of whiteware that appear to be from one set are plain on the interior, with a purple floral overglaze decal applied on the yellow glazed exterior (Figure 5.65a-c). Other pieces of this same set are decorated on the interior where the yellow glaze extends almost to the edge of the rim; there an overglaze gilt band circles the top. Judging by the size and configuration of these sherds, those with interior decoration may be from a large wash bowl; the others are from a commode. It is possible that some of the sherds are from a pitcher. Some of the sherds are exfoliating badly, and a number are rust stained and/or burned.

Another whiteware set is represented by two sherds which are probably from a pitcher or commode and wash bowl. These have a pink glaze with gilt overglaze trim (Figure 5.66a and b).

Pieces of a heavy semi-porcelain vessel, probably part of a bowl and pitcher set, were also found in the trash deposits of unit 25-D. One of

Table 5.21: Summary of furnishing and housekeeping artifacts

FURNISHINGS CLASS										
Type	Description	FILL	GOLD	MIXED	POST	STS	STS	F202	U25-D	TOTAL
			RUSH		1900	1983	1985	& F204	DIST.	
blind parts	ferrous roller blind end				1				1	2
chamberpot	hard whiteware blue transfer pr.		1							1
chamberpot	heavy whiteware rim								1	1
clock part	small yellow metal								1	1
coat hook	ferrous decorative		1							1
curtain hook	plated white metal				1					1
decorative furnishing	vase? ribbed porcelain, poly.				1					1
decorative furnishing	unglazed redware w/ green paint				1					1
decorative furnishing	coarse red earthenware		1		2					3
flower pot	coarse red earthenware	4	14		7				23	48
handle/pull	ferrous		2							2
handle/pull	white metal		1		1					2
mirror	fragment, heavy bevelled	1								1
plastic flowers	green leaf	1								1
plate glass	bevelled				1					1
washbasin/pitcher	whiteware, decal, yellow glaze		34		0		11		21	66
washbasin/pitcher	porcelain, gilt over pink glaze	3	16		1		1		16	37
Housekeeping										0
broom	blue plastic bristle				1					1
broom or mop	handle, wood		1							1
closepin spring	ferrous	1			1	2			1	5
contact paper	plastic, black and white	1								1
										0
TOTAL		11	71	0	18	2	12	0	64	178

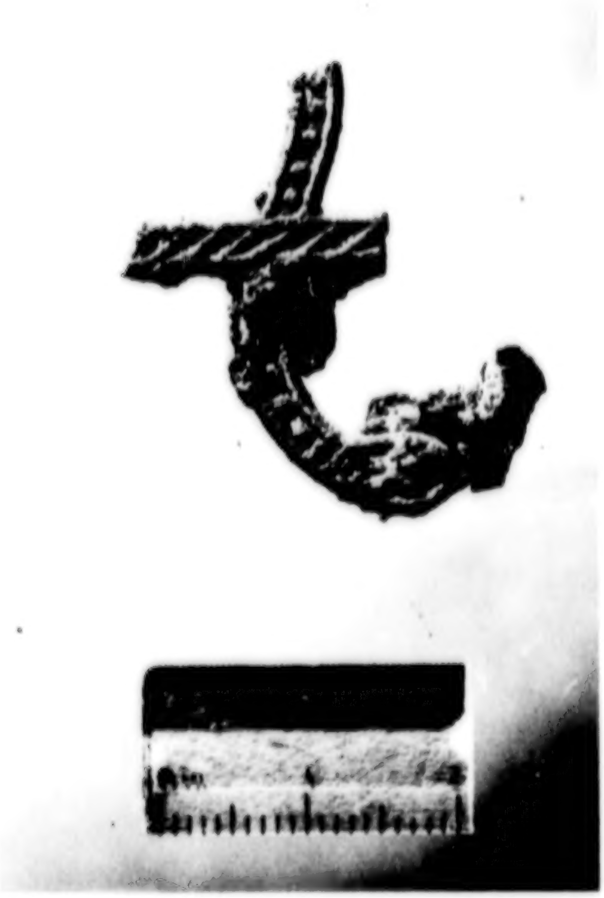

Figure 5.64: Ferrous coat and hat hook

the sherds has a faded pink glaze trimmed with gilt lines and speckles on the interior; the other is glazed in pink on the exterior of the piece (Figure 5.65d).

The handle and a portion of the body and rim of a hard whiteware (ironstone) chamber pot were found in the trash deposits of unit 25-B. This prosaic piece of bedroom furniture is decorated with an underglaze turquoise blue floral decal or open transfer print.

A molded, ribbed porcelain sherd from the Operation 21 test trench may have been part of a lamp or other decorative furnishing (Figure 5.66e). The pale lavender slip on the exterior is decorated with an overglaze gold luster and black enamel. Unfortunately, the sherd is too small to determine the type of decorative motif.

Several pieces of hardware are included in the Furnishings Class. One of these, the end from a roller blind, was found in the lower strata of unit 25-B. This artifact is identical to another one found in stratum D of unit 25-D, but unlike the latter, the round projecting end that inserts into the wall-mounted blind holder has not been broken away.

A 3-inch long ferrous wire handle or pull found in unit 25-B is of the self-hinged variety, and is affixed to a flat metal backing. This handle is probably from a metal file box or cabinet. The Sears catalog for 1902 (1969:591) illustrates several "light cash boxes" and "combination lock cash or treasure boxes" with similar handles. A small, round, hollow, white metal drawer pull was also found in this unit.

A very heavy (about 3/8 inch thick) piece of pale aqua plate glass was found in unit 25-D. This 3-½ by 3-¼ inch piece of glass is beveled along three sides. At the top of and parallel to the edge bevel is a narrow band of small decorative scallops, also beveled into the glass. This piece of decorative glass may have come from a transom, a door, a cupboard, etc.

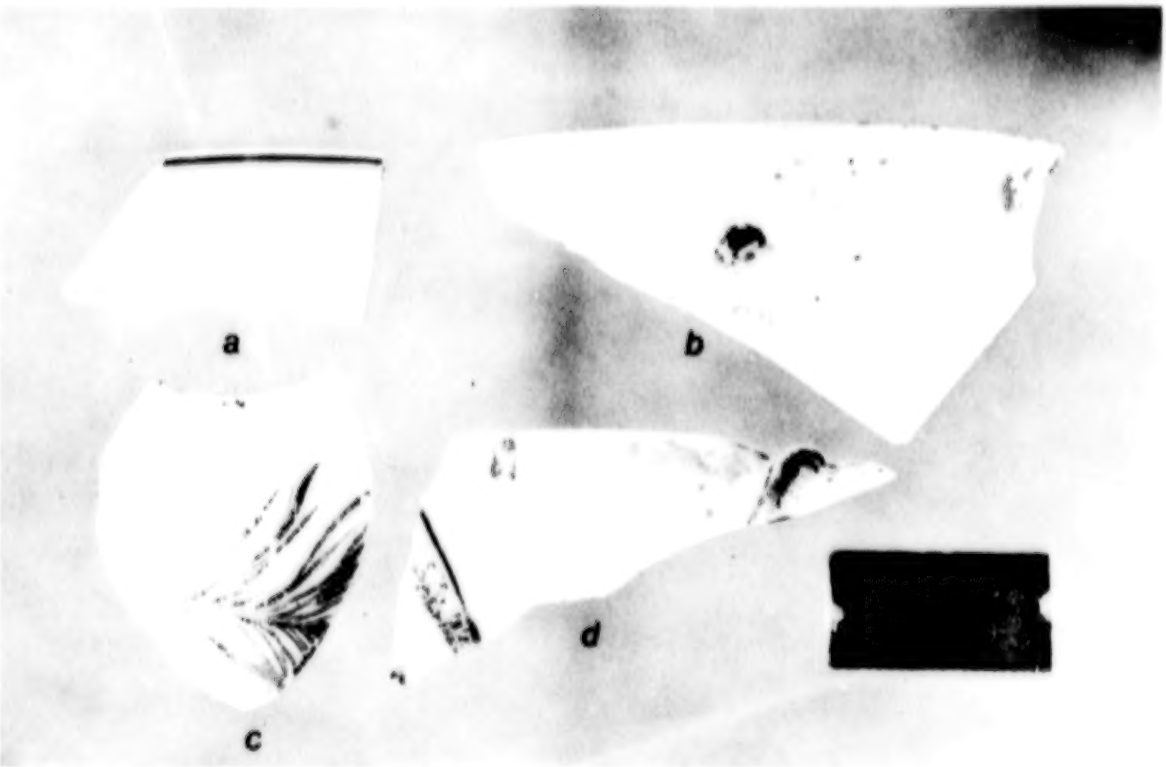

Figure 5.65: Heavy whiteware and semi-porcelain sherds from commode and bowl and pitcher

a. Yellow and purple decorated whiteware sherd from wash basin
b. Yellow and purple decorated whiteware sherd from commode
c. Yellow and purple decorated whiteware sherd from pitcher
d. Pink and gilt decorated semi-porcelain sherd from wash basin

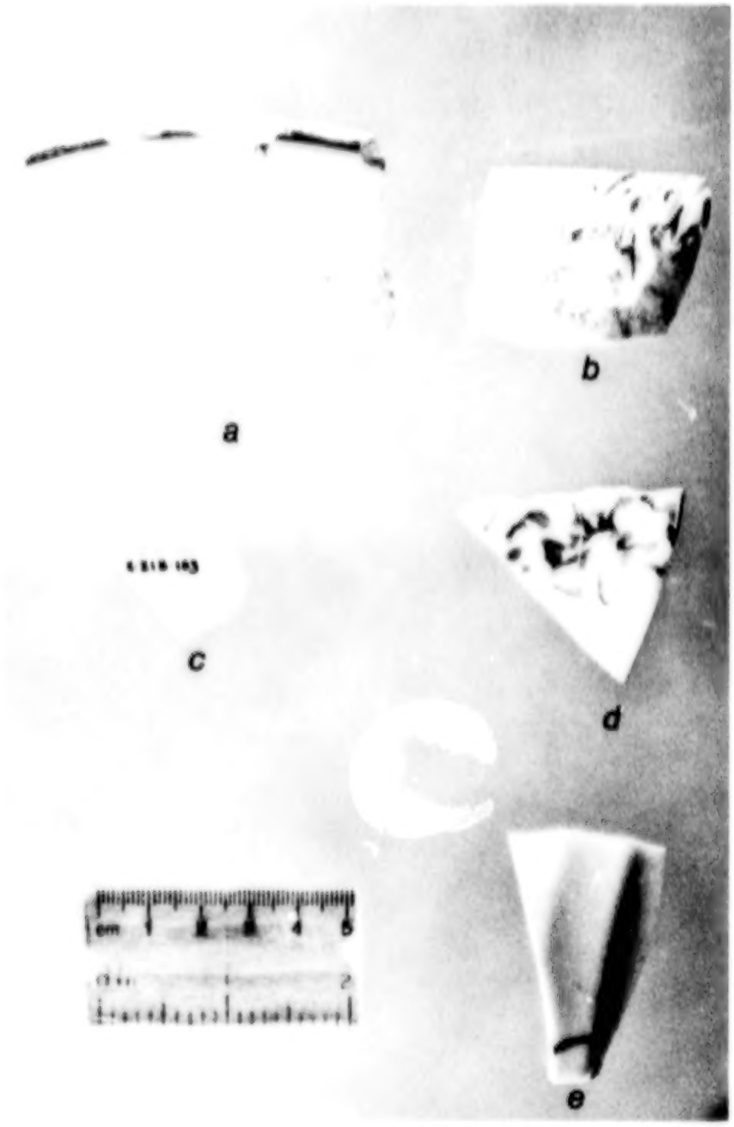

Figure 5.66: Assorted whiteware and porcelain sherds
a,b. Whiteware sherd decorated with gilt trim over pink glaze
c. Pink body earthenware
d. Porcelain with gilt overglaze trim
e. Porcelain sherd with purple glaze, gilt overglaze trim

A single piece of a heavy, curved, textured yellow glass found in the lower levels of unit 25-B was included in the furnishings. It was probably from a vase or some other decorative item.

Post 1900 Furnishings: A sherd of unglazed redware found in the upper levels of the Operation 21 test trench C retains traces of a mint green overglaze enamel. This was probably a flower pot or a similar decorative furnishing.

A round metal drawer pull was found in the Operation 21 test trench A (Figure 5.67). The 1½ inch diameter base of the pull is a thin sheet of stamped yellow or white metal, convex in shape. It is stamped with a stylized geometric floral design and has splashes of white paint around the exterior. The bolt which goes through the center of the back plate is ferrous, and has a stirrup-like attachment on one end from which a dangling, pendulum-like pull likely hung. Often the pull was of the same wood as the piece of furniture. Nearly identical items, "Drop Ebony Pulls," are shown in the Sears Catalog for 1902 (1969:544).

Unit 25-D.Disturbed Furnishings: Several pieces of hardware from roller blinds were found in the excavations. One of these, a circular, cup-like ferrous artifact with what appeared to be the broken-away end of a projecting piece, was found in stratum D. Another badly deteriorated ferrous object appears to have the same general configuration. These are probably part of the hardware that fits over the end of the blind roller to hold it into the hook-like wall supports.

One of the miscellaneous items from stratum D of unit 25-D is a flat yellow metal plate measuring approximately 2-½ by 2-1/3 inches (Figure 5.68). The body of the plate has two large cut-out areas, a series of rectangular slots, and round holes of assorted sizes around the edges and across the center. It also has a small, moveable, incomplete (?) leverlike attachment riveted on the long side of the plate about one-third way from one end. This appears to be a part of a clock.

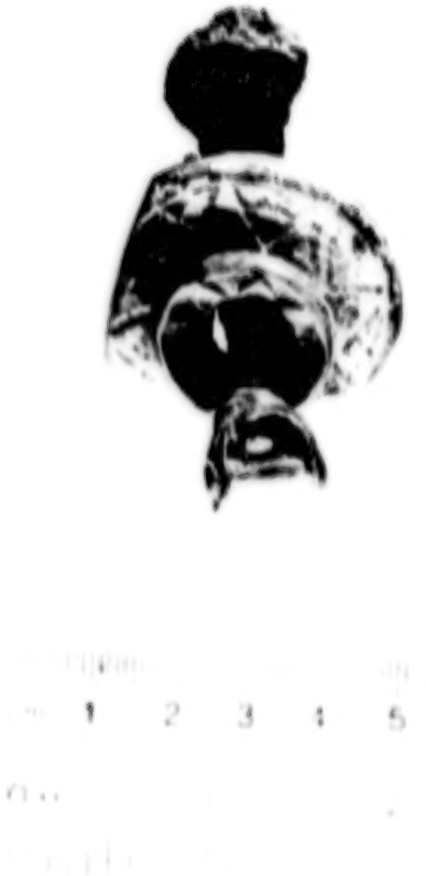

Figure 5.67: Decorative drawer pull

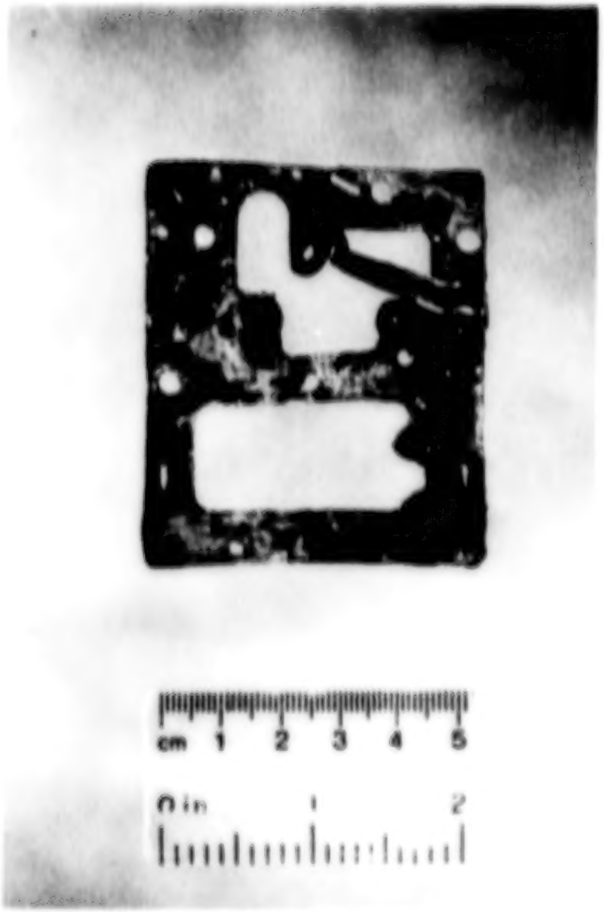

Figure 5.68: Clock part

Sherds from a purple floral decal decorated yellow glazed whiteware commode, the same as or similar to the items found in the Gold Rush deposits, were found in the upper levels of unit 25-D (Figure 5.65b).

Shovel Tests Furnishings: Pieces of the same, or similar, yellow and purple whiteware set discussed under the Gold Rush and Post-1900 period artifacts were found in the 1985 shovel tests.

Housekeeping Class

Only a few housekeeping items such as clothespin and broom parts were found in the Peniel Mission excavations. Most are undiagnostic.

Post-1900: Badly corroded coiled ferrous wire clothespin springs were found in unit 25-D. The ends of the wires extend out from the spring coil and are bent towards each other. Their presence in this area suggests there may have been a clothesline somewhere in the vicinity.

PHARMACEUTICAL CLASS

The pharmaceutical class artifacts are itemized in Table 5.22 and summarized in Table 5.23.

Gold Rush Pharmaceuticals: Several pieces of a small, square, amber bottle with a tooled prescription finish were found in unit 25-A (Figure 5.69). Vertical stretch marks are visible along the narrow, slightly irregular neck. The neck seams were partially obliterated by the lipping tool. The bottle was shaped in a cup-bottom mold. There are four small raised circular nibs on the base, one on each of the four corners. Embossed on the base are the letters SCCO. Sherds from stratum E and stratum F mend with this bottle. Several other small sherds from the same or a similar bottle found in the Post-1900 levels did not mend with this item, but are the same color, texture, and thickness. According to Goodwin et al. (1983:114) embossed lettering on pharmaceutical bottles was in vogue between the 1860s and the 1920s. Twenty-three sherds of colorless glass mend to form a partial bottle. This item is footed, and round in cross-section. A partial embossed inscription below the shoulder reads ". . . URINE." Just above the base, a second inscription identifies this as a product of "JNO MILLIKEN 7 CO / ST LOUIS, Mo / U.S.A." This was probably a Pasteurine bottle, identical to the one illustrated in The Bottle Book (Fike 1987:71). This product contains oils of cinnamon, eucalyptus, lemon, and wintergreen dissovled in alcohol (Nemec 1988).

Sherds from a heavy brown bottle were also found in unit 25-A. These fragments were from a tooled patent lip with a 1.1 inch bore, and a fairly short neck (Figure 5.70). The neck seams have been obliterated by the lipping tool, and stretch marks show on the side of the neck.

A small colorless glass bottle found in unit 25-B is very much like the "Western Oval" flint glass prescription ware advertised in a turn of the century glass manufacturer's catalog (Putnam 1965:33). This 3-3/4 inch high bottle, shaped in a cup-bottom mold, has a tooled prescription

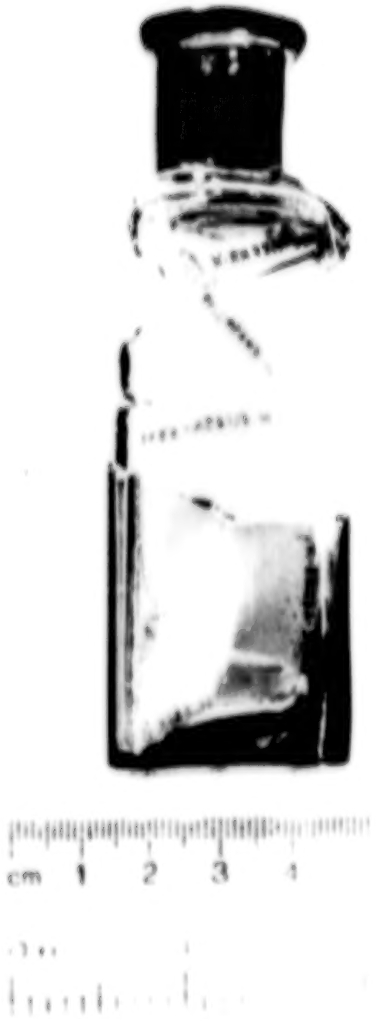

Figure 5.69: Amber glass prescription bottle

Table 5.22: Pharmaceutical artifacts inventory

PHARMACEUTICAL CLASS		FILL	GOLD	MIXED	POST	STS	STS	F202	U25-D	TOTAL
Type	Description		RUSH		1900	1983	1985	& F204	DIST.	ALL
pharmaceutical/chem. bottle	brown rectangular screw top, Owens								1	1
square shldr round bottle	aqua, extract lip								1	1
square shldr round bottle fgs	aqua, extract lip								1	1
bottle fgs, panelled bottle	cobalt, embossed		12						2	14
bottle fgs, panelled bottle	light green, embossed						22		1	23
bottle fgs, patent/extract	colorless, Rx lip		12							12
bottle fgs, patent/extract	colorless, Pasteurine bottle		23							23
bottle fgs, pharm.	colorless, large bottle		24							24
bottle fgs, pharm.	colorless, oval Rx		37						1	38
bottle fgs, pharm. base	amber, small square embossed		1							1
bottle fgs, panelled base	aqua, rectangular panelled		1							1
bottle fgs, panelled base	aqua, embossed								1	1
bottle fgs, panelled base	colorless, rectangular panelled		1				3			4
bottle fgs, panelled base	cobalt		3						1	4
bottle fgs, base	brown, "Red Spirits"				1					1
bottle fgs, base	colorless, round/oval		1				1			2
bottle fgs, base	colorless, thin Philadelphia oval base		3							3
bottle fgs, base	colorless, thin small rectilinear		1						2	3
bottle fgs, base	colorless, thin small round/oval		7						2	9
bottle fgs, finish	amber Rx		1							1
bottle fgs, finish	amethyst, Rx		1				1			2
bottle fgs, finish	aqua, collar with ring		1	1						2
bottle fgs, finish	aqua, oil		2							2
bottle fgs, finish	aqua, patent lip		1							1
bottle fgs, finish	colorless, Rx lip		1		1				1	3
bottle fgs, finish	colorless, patent lip		1						2	3
bottle fgs, panelled body	aqua		10		1		1		5	17
bottle fgs, panelled body	aqua, embossed		9						9	18
bottle fgs, panelled body	colorless	1	45	11	2	1	2		20	82
bottle fgs, panelled body	colorless, embossed		12			1				13
bottle fgs, panelled body	cobalt blue								3	3
bottle fgs, body	amber		4	1						5
bottle fgs, body	amethyst, thin, etched				1					1
bottle fgs, body	aqua, embossed	1		1						2
bottle fgs, body	aqua, thin				8					8
bottle fgs, body	colorless, thin	3	10	6	7		1		15	42
bottle fgs, body	cobalt blue		14		5	3			10	32
bottle fgs, body	light blue embossed		1							1
bottle fgs, body	yellow, thin								11	11
pharmaceutical vial	colorless, hand finished		1							1
pharmaceutical vial	colorless, yellow metal screw lid		1							1
stirring rod	colorless glass		1		1					2
thermometer	colorless glass				1					1
										0
TOTAL		5	242	20	28	5	31	0	89	420

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Table 5.23: Summary of pharmaceutical artifacts

PHARMACEUTICAL CLASS								
	FILL	GOLD	MIXED	POST	STS	STS	U25-D	TOTAL
Description		RUSH		1900	1983	1985	DIST.	
Msc. medical supplies	0	3	0	2	0	0	0	5
Bottles	0	0	0	0	0	0	0	0
whole	0	0	0	0	0	0	2	2
fragmentary	0	108	0	0	0	22	5	135
base sherds	0	18	0	1	0	4	6	29
finish sherds	0	8	1	1	0	1	3	14
body sherds	5	105	19	24	5	4	73	235
								0
TOTAL	5	242	20	28	5	31	89	420
Bottles								
whole brown	0	0	0	0	0	0	1	1
whole aqua	0	0	0	0	0	0	1	1
fragmentary (sherds)			0					0
amber	0	6	1	0	0	0	0	7
amythest	0	1	0	1	0	1	0	3
aqua	1	24	2	10	0	1	16	54
brown	0	0	0	1	0	0	0	1
colorless	4	181	17	11	2	7	43	265
cobalt blue	0	29	0	5	3	0	16	53
light blue	0	1	0	0	0	0	0	1
light green	0	0	0	0	0	22	1	23
yellow	0	0	0	0	0	0	11	11
								0
TOTAL	5	242	20	28	5	31	89	420

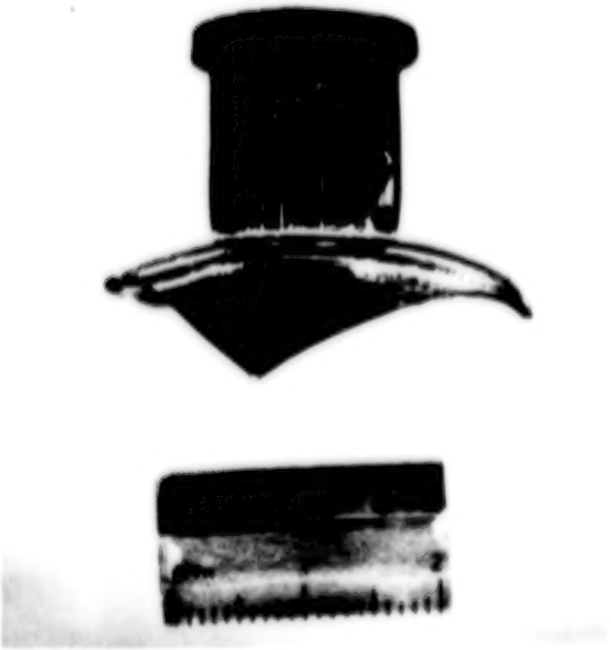

Figure 5.70: Brown glass patent lip finish

lip finish, and an oval bordered indented base (Figure 5.71). In the center of the base are the letters OG / CO.

An oval-shaped prescription bottle embossed on the front with the words "GLYCO - THYMOLINE" was found in stratum E of the Operation 21 test trench C (Figure 5.72). This colorless glass bottle had the cork in place when found. The bottle finish has a prescription lip above a narrow collar. An embossed maker's mark on the base reads "K&O Co. / NEW YORK." Compu-Mark (1985:n.p.) lists Glyco-Thymoline as a trade mark of the Kress and Owen Company, New York. No further information is listed for this company. According to one author (Hanson 1971:80) use of glyco-thymoline dates between ca. 1885 and 1912. However, this product can still be purchased today for use as a mouth wash.

Another colorless glass bottle was partially reconstructed from sherds found in the lower strata of the Operation 21 test trench C (Figure 5.73). This bottle is oval in cross section, with squared shoulders. One panel is slightly concave, the other slightly convex. It has a smoothly finished tooled lip. The base is embossed with a series of hatch marks around the perimeter.

A very similar bottle from the same strata and test trench unit has a tooled prescription finish. It was formed in a cup-bottom mold; the base has an embossed inscription which reads "L BRO S."

A small, flat embossed sherd of light blue glass was found in the lower strata of excavation unit 25-D. The raised circular [?] embossing on the face of the sherd is intersected by a diagonal seam which extends to the corner of the sherd (Figure 5.74). Just to the right of the diagonal is an irregularly shaped 5-pointed star. Inside the circular embossing the area is concave, and contains a raised, embossed human figure carrying a large fish over his shoulder. The sherd may have been water polished, for the embossed areas are smoothed and poorly defined. An identical figure is pictured on a Scott's Emulsion of Cod Liver Oil bottle (Tibbitts 1964:70). An advertisement for this product in the May

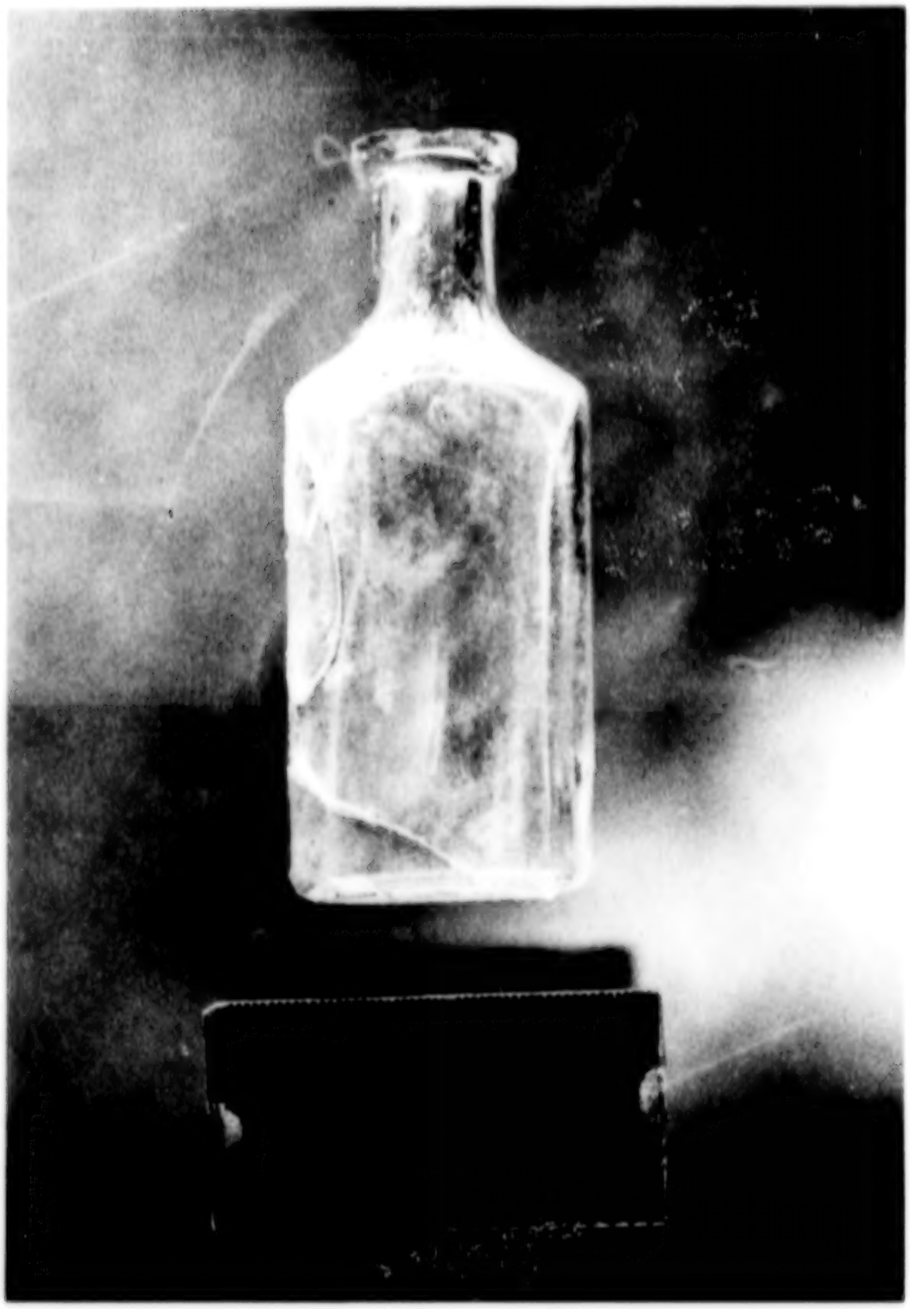

Figure 5.71: Colorless glass prescription bottle

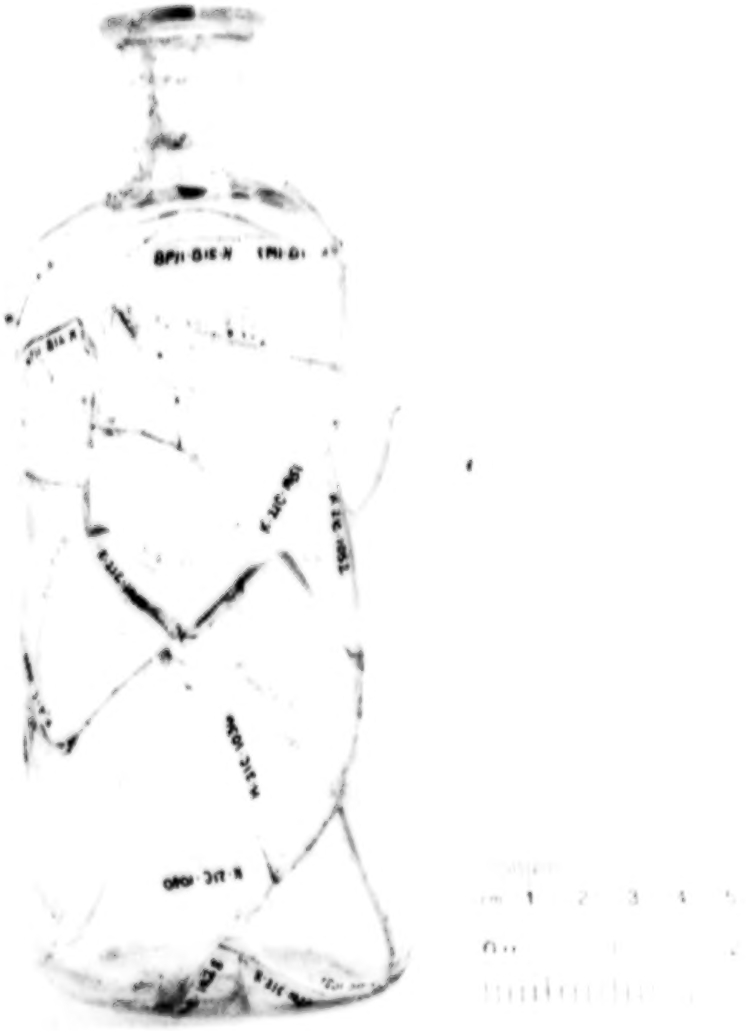

Figure 5.72: Colorless glass Glyco-thymoline bottle

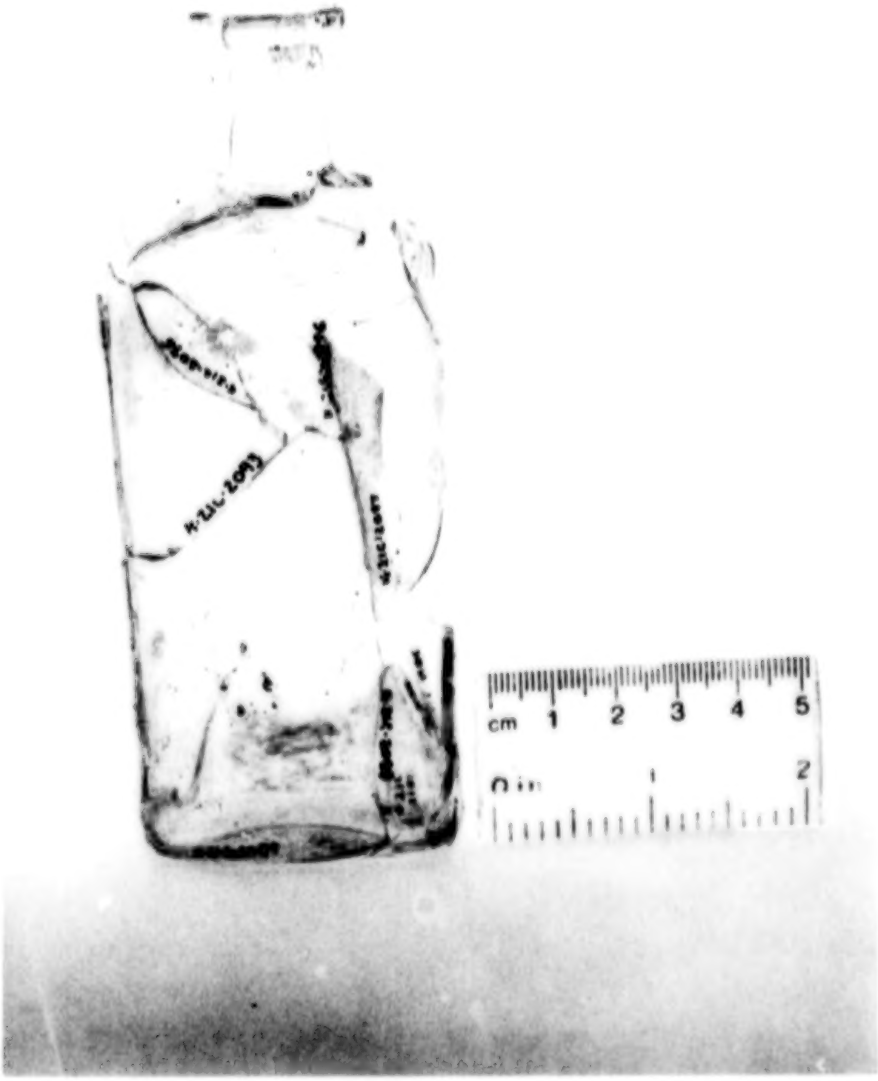

Figure 5.73: Colorless glass panelled pharmaceutical bottle

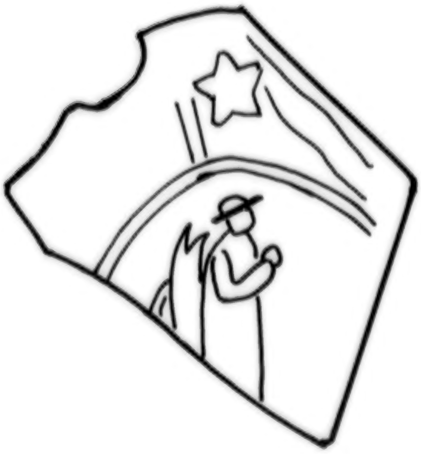

Figure 5.74: Drawing of design from Scott's Emulsion of Cod Liver Oil bottle

2, 1885 Harper's Weekly describes it: "For consumption, coughs, etc. It is almost as palatable as milk" (Baldwin 1973:437). According to Baldwin, Scott's emulsion was bottled in a rectangular panelled bottle; the legend read "COD LIVER OIL" on side of the bottle, and "WITH LIME & SODA" on the other. The picture of the man carrying a fish (inside a circle) was embossed on the base; in later variants the picture was embossed on the front panel. This mark/product was patented by Scott and Browne, New York, July 4, 1876 (Herst 1987).

A number of cobalt blue sherds from panelled bottles were found in unit 25-D. One of these is a tooled patent lip with a 1-inch neck and .415 inch bore. Included in this group also are several embossed panel sherds. Only one has more than an isolated letter or two; it reads "WAK . . . / . . . AMELL . . ."

A small (2¼-inch long by about 5/8 inch diameter) cylindrical colorless glass vial was found in unit 25-D (Figure 5.75a). The yellow metal screw top is badly deteriorated, and the vial is filled with an unidentified rusty colored material. Identical vials are shown in a late nineteenth century glass catalog published by Dean, Foster, and Company of Boston (Freeman 1964:426). These homeopathic vials, "Short Shape Only" came in 6 sizes, ranging from 1 drachms to 8 drachms (drams) (ibid).

Another vial, also of colorless glass, was found in the trash deposit of the Operation 21 test trench A (Figure 5.75b). This 5½ inch high by 1-3/4 inch diameter vial, made in a two piece mold, has a slightly flared, hand-finished lip. The lack of seams on/near the base suggests this may have been hand-blown held in a snap case. Again, similar items are illustrated in the Dean, Foster, and Company catalog (Freeman 1964:426). These small containers, also listed under "Homeopathic Vials," range from a 1/8th drachm size to 8 drachm (dram) size.

Miscellaneous bottle sherds include portions of a colorless glass tooled patent lip (unit 25-B), and angular body pieces from colorless

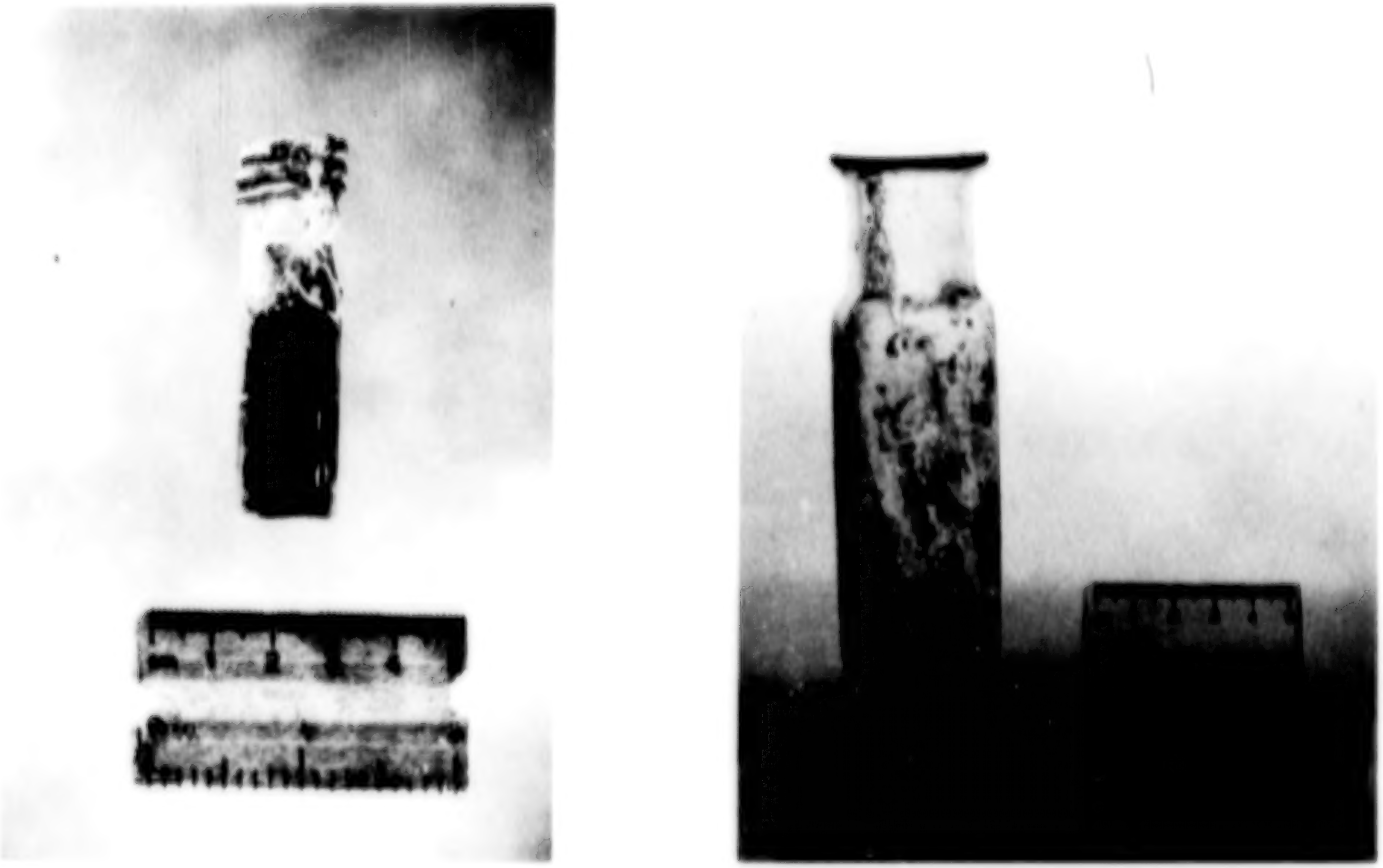

Figure 5.75: Colorless glass vials
a) Glass vial with yellow metal lid

b) Handblown colorless glass vial

glass paneled bottles. Several of the paneled body sherds are embossed. Eleven embossed sherds found in unit 25-B are from a minimum of two fairly large bottles, possibly up to 32 ounces in size. Unfortunately none of the sherds join together; the embossed letters read "F;" "UP;" "O / UR;" "E;" and "SV" respectively.

Sherds from the trash deposits include very thin, slightly curved glass that may have come from thin, oval prescription ware Putnam 1965:30, 33). Other recovered colorless glass bottle sherds are much like the tincture bottles or "round casewells" illustrated in Putnam (1965:97 and 87 respectively).

A fragment of a glass stirring rod measuring .15 inch in diameter was found in unit 25-B. This broken clear glass rod is similar to the item found in the post-1900 levels of unit 25-A.

Post-1900 Pharmaceutical: Parts of several identifiable bottles were found in these strata. One of these, the base from a brown patent medicine bottle, was found in excavation unit 25-A. Around the perimeter of the base are the words "RED [RAVE]N." In the center of the base are the numerals and letters "3 / 919 / SPLITS."[1] This bottle probably contained Red Raven Split, an "aperient for dyspepsia, liver and stomach disorders, gall stones, obesity, etc." (Devner 1968:79). The dates Devner lists for this bottle are "prior to 1906, and probably 1899--Red Raven Corp., Harnerville, Pa., 1908, 1911. . ." (Ibid.) Unfortunately no explanation for this somewhat confusing description is offered in the preface and we can only assume that the bottle dates somewhere between 1899 and 1911. The accompanying illustration shows a round, medium necked patent medicine bottle with what appears to be a double bead finish and post mold base. The bottle is described as amber-red, mold blown, found in California.

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[1] The last letter is hard to read; it may be the numeral "9" instead of the letter "S".

Pieces from the same (or similar) square amber pharmaceutical bottle discovered in the lower strata of unit 25-A were found in strata C and D.

Two sherds that appear to be from the same aqua glass panelled bottle were found in unit 25-B. One is a body sherd; it is embossed with the letters ". . . BL. . . ." The second item is a double ring or "ring-lip" finish that has been tooled (Figure 5.15k). The side seam ends just below the bottom ring finish, and the bore tapers inward in the upper 3/8 inch of lip. The bottle had an arrow or mammoth panel (Berge 1980:59). Similar bottles are pictured in Wilson (1981:48, 51, 59).

Another panelled bottle from unit 25-D has the word COD, presumably for cod liver oil, on the border panel. This item was probably made in a cup-bottom mold.

Several types of bottle lip/neck finishes were found in the post-1900 excavations. These include several tooled prescription patent finish lips from colorless glass bottles with a short neck, found in units 25-A and 25-D.

A small colorless body sherd from unit 25-A has a fine line etched across the midpoint, perpendicular to its long axis. This line may be from some sort of graduated measure or medicinal bottle.

Other bottle sherds from the post-1900 levels of unit 25-A include a number of panelled bottle fragments. Some of the clear glass front panel fragments are from an arrow or mammoth style panel (Berge 1980:59).

A fine, colorless, solid glass rod from unit 25-A has a flat "head" on one end. The letter "O" is embossed on the head, slightly off center. The other end of the rod is broken away. This is probably a stirring rod, similar to those shown in Putnam (1965:125). It may also have been used to dispense small quantities of acid, acetone, mercuricrome, iodine, merthiolade, etc. A similar piece of clear glass rod was found in unit 25-B.

Miscellaneous pharmaceutical items also include a fragment of a glass thermometer found in the upper levels of the Operation 21 test trench C.

Unit 25-D(Disturbed) Pharmaceutical: A base/body sherd from a round aqua bottle found in the upper levels of unit 25-D has the embossed inscription ". . . ORK" vertically on the bottle side panel. Although positive identification cannot be made based on this fragmentary embossing, the lettering on this cup-molded bottle, and its color and shape are nearly identical to a Mexican Mustang Liniment Bottle from the Lynn Manufacturing Company, New York, illustrated in Berge (1980:94,97). Berge describes the background of the manufacturer and he notes the company operated after circa 1860. This type of round prescription bottle was used between 1880 and 1913 (1980:97).

A whole brown bottle was found in this stratum (Figure 5.76). A corroded ferrous metal lid with a waxed cardboard liner was still on the bottle. This machine-made, screw top item was produced in a post-bottom mold; the base has a large off-center oval whose seams connect to the basal heel seams. Above the heel seam in the center of the bottle are the numeral 12 and the company's mark, IPG, set in a raised triangle. This logo stands for the Illinois Pacific Glass Company, San Francisco, circa 1902-1930 (Toulouse 1971: 268-271).[2]

Another whole bottle found in this disturbed stratum is a square shouldered round bottle with a tooled extract lip and a short neck (Figure 5.77). It has a modestly concave bordered base shaped in a cup-bottom mold. The numeral "3" appears in the center of the base. Similar bottles are illustrated in Putnam (1981:42 and 64). (1981:39). The upper portion of a second, nearly identical bottle, was also found in this stratum.[3]

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[2] When the Illinois Pacific Glass Company merged with Pacific Coast Glass in 1930, the letter "C" replaced the "G" in the trade mark.

[3] This bottle may have held a pomade (unguent for the hair and scalp), or shoe polish.

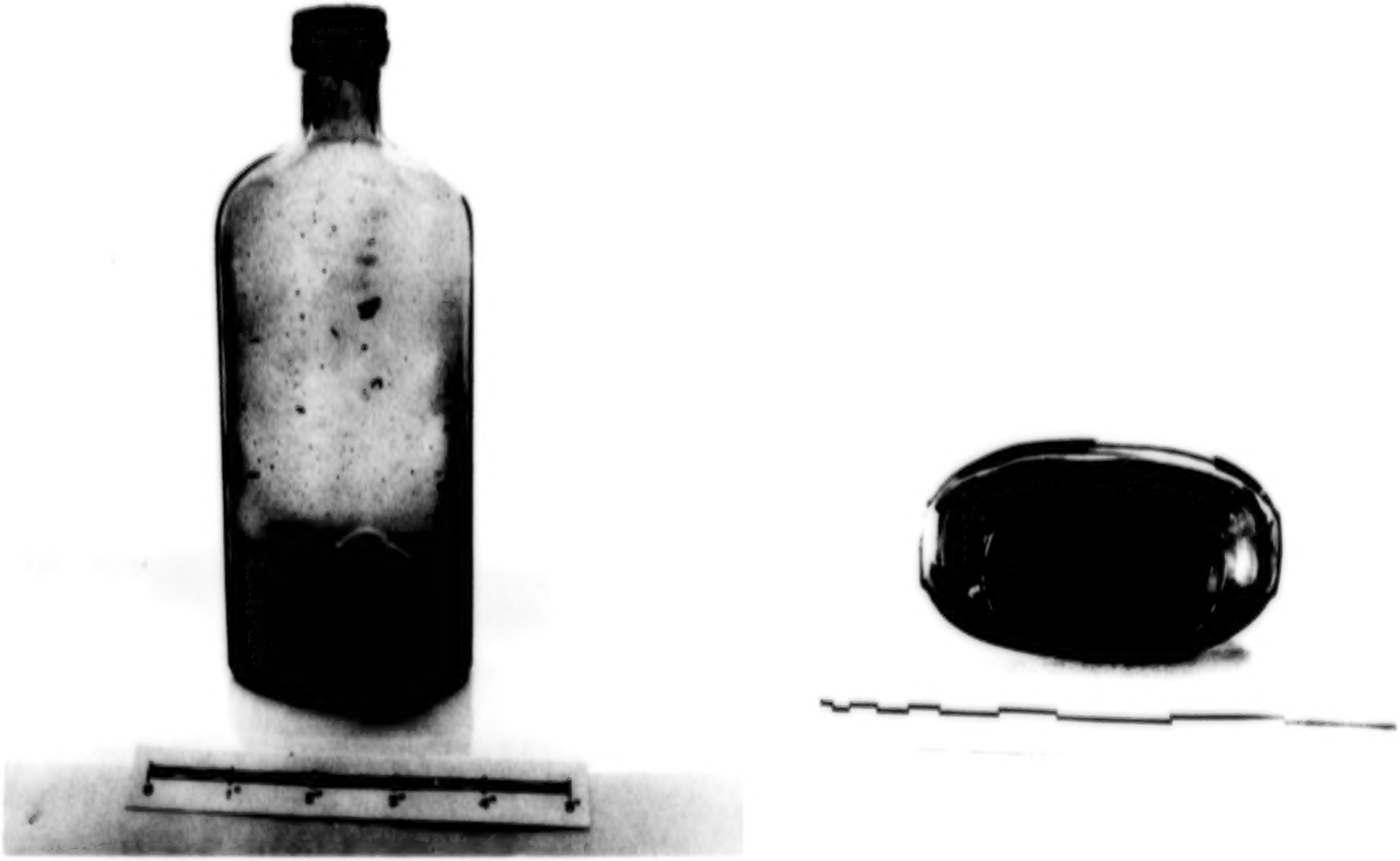

Figure 5.76: Brown glass pharmaceutical bottle

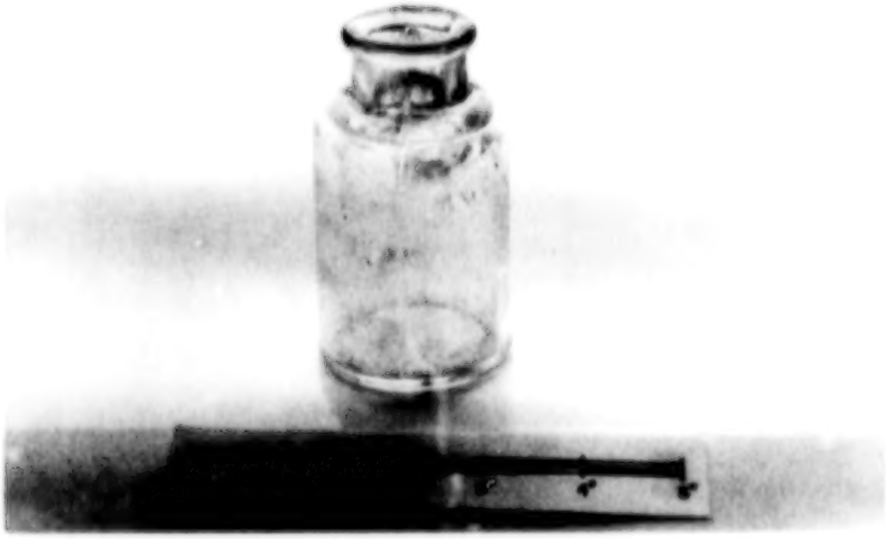

Figure 5.77: Square-shouldered round bottle

The embossed logo "WT & CO / SA" appears on an aqua basal sherd from a panelled bottle. This bottle was probably manufactured by Whitall-Tatum between 1857 and 1935 (Toulouse 1971:544-547).

Numerous embossed and plain sherds from small panelled bottles were found in stratum D. The majority of these contained isolated letters and numerals, and the maker or product could not be identified.

Shovel Tests Pharmaceuticals: Twenty-two light green sherds found in the 1985 shovel tests mend to form a partial prescription bottle (Figure 5.78). The flat, rectangular base with squared corners is known as an ideal oval. The front and back panels are arrow shaped but are not inset. On one side panel are the letters . . . OPHOROS; on the other, the company name, SEARLES.

The original contents of this bottle are unknown, but it was most likely an organic syrup or elixir of some sort. At first it was thought this bottle had come from G.D. Searle and Company, a pharmaceutical company, founded in the 1880's for the manufacture of syrups, tinctures, and elixers. However, contact with the company, now a subsidiary of Monsanto, elicited the information that their bottles were not marked in this manner (Kraust 1987). Its origin is therefore unknown.

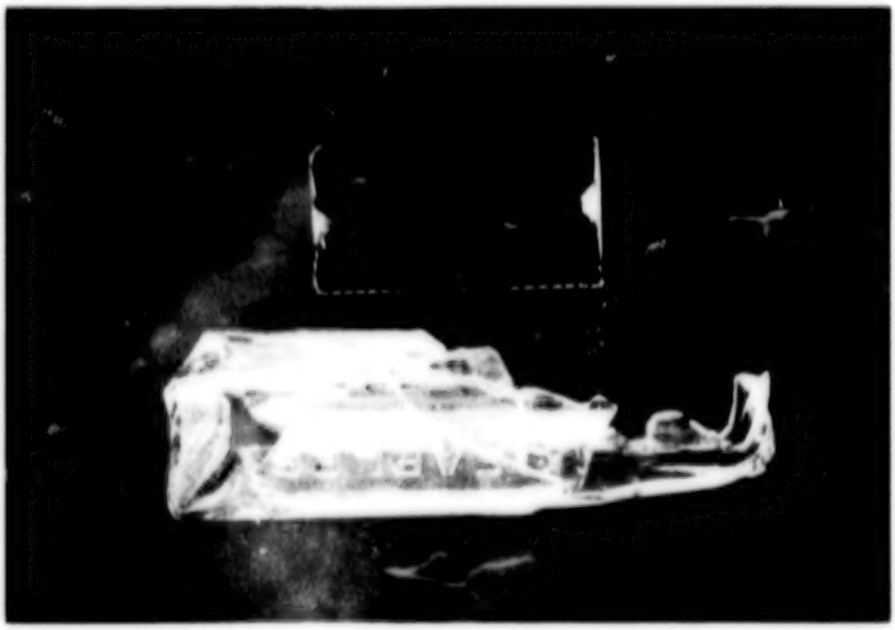

Figure 5.78: Panelled Searles prescription bottle

PERSONAL GROUP

This group includes personally owned items, things that tend to be carried about, or used by an individual rather than a corporate entity. This group has been divided into Clothing, Personal Ornamentation, Grooming and Hygiene, and Money.

Appendix A.5 contains an inventory of the Personal Group artifacts. Table 5.24 summarizes the Personal Group artifacts. Items from the disturbed soils of unit 25-C and from the filled areas are included in the inventory and in some of the photographs, but they are not discussed in the text. The same is true for a number of familiar items such as curler pins, chalk, etc. that do not require further description. In several instances, similar or identical artifacts such as buttons and fasteners found in different strata are described only once in the text. The reader is referred to the inventory (Appendix A.5) for further occurrences of these items.

CLOTHING CLASS

Gold Rush Clothing: A number of types of clothing fasteners, from buckles to a safety pin, were found in the Peniel Mission excavations (Appendix A.6) (Figures 5.79 through 5.84). The majority of these items came from the trash deposits of the Gold Rush period.

A small rectangular decorative yellow metal buckle was found in test trench 21-B (Figure 5.79). This buckle measures 5/8 inch by 3/8 inch in size. The front is stamped with geometric designs consisting of a series of parallel lines around the perimeter, and circles of ascending size on each corner. A fleur-de-lis pattern appears at the center of each side. The center of the buckle is a rectangular cut-out; the center rod runs parallel to the long axis of the buckle, and appears to have been attached with solder. This probably represents a sliding-type buckle that did not have a shank.

Table 5.24: Summary of Personal Group artifacts

PERSONAL GROUP	FILL	GOLD	MIXED	POST	STS	STS	U25-D	TOTAL
		RUSH		1900	1983	1985	DIST.	
Clothing								
Accessories		9		1				10
Fabric and yarn	4	17		4		3		28
Fasteners								0
buckles		2					1	3
buttons	4	16		7			4	31
garter supporters		2		1				3
msc. fasteners		26	1	1	1	1	2	32
Footwear		32			1	2	13	48
Making and repair		3			1			4
Grooming and hygiene	5	33		9	1	2	14	64
Money	1							1
Personal ornamentation	3	8		3				14
								0
TOTAL	17	148	1	26	4	8	34	238

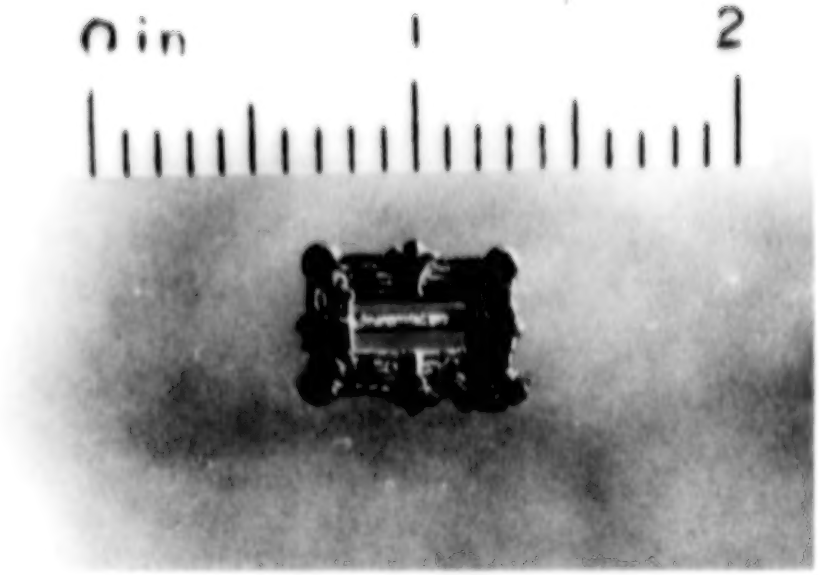

Figure 5.79: Yellow metal decorative buckle

Two small sliding-type yellow-metal strap holders similar to those used on brassieres or suspenders were found in test trench 21-C. One item has pointed teeth to hold the strap in place (Figure 5.80f). Found in this same trench was a badly corroded ferrous buckle part measuring 1 inch by 3/4 inch.

Other clothing fasteners recovered from the pre-1900 strata of the excavation units and from the Operation test trench 21-C include 5/8-inch wide yellow metal key-hole shaped loops from hose supporters (Figure 5.80c). These are very similar to the "Flexo Grasp Hose Supporters" pictured in the Sears Roebuck Catalog for 1902 (1969:940). The supporters may have come from a women's or child's garter belt, or from a man's garters. Flat ferrous metal keyhole-shaped fasteners found in the Gold Rush period strata may also have come from hose suspenders or from a garter belt (Figure 5.80d). A triangular-shaped yellow metal wire object found in test trench 21-B may have been a garter or girdle part (Figure 5.80e).

A deteriorated white metal sanitary belt fastener was found in test trench 21-B. It is semi-oval, has two small rivets on the proximal end and a key-hole shaped cut-out on the distal portion (Figure 5.80g).

Fragments of ferrous overall or vest strap fasteners, the upper portion of a garter fastener, and sliding fasteners used to shorten slip or brassiere straps, men's sleeve garters, sock supporters, etc. were found in unit 25-B; some of these are illustrated in Figure 5.81a-d. The two somewhat wider, bent-wire fasteners are probably from overall suspenders. Similar items are shown in the Wards catalog for 1895 (1969:88-89), and in Adams et al (1975:263).

Several sizes of ferrous hook and eye type fasterners were found in the excavations. These bent wire items with two sew-through holes may be the "De Long" variety; i.e. the center portion of the underside of the hook is slightly raised to help keep the hook fastened (Montgomery Wards 1969:89). These hooks are fragmentary, but the estimated sizes range

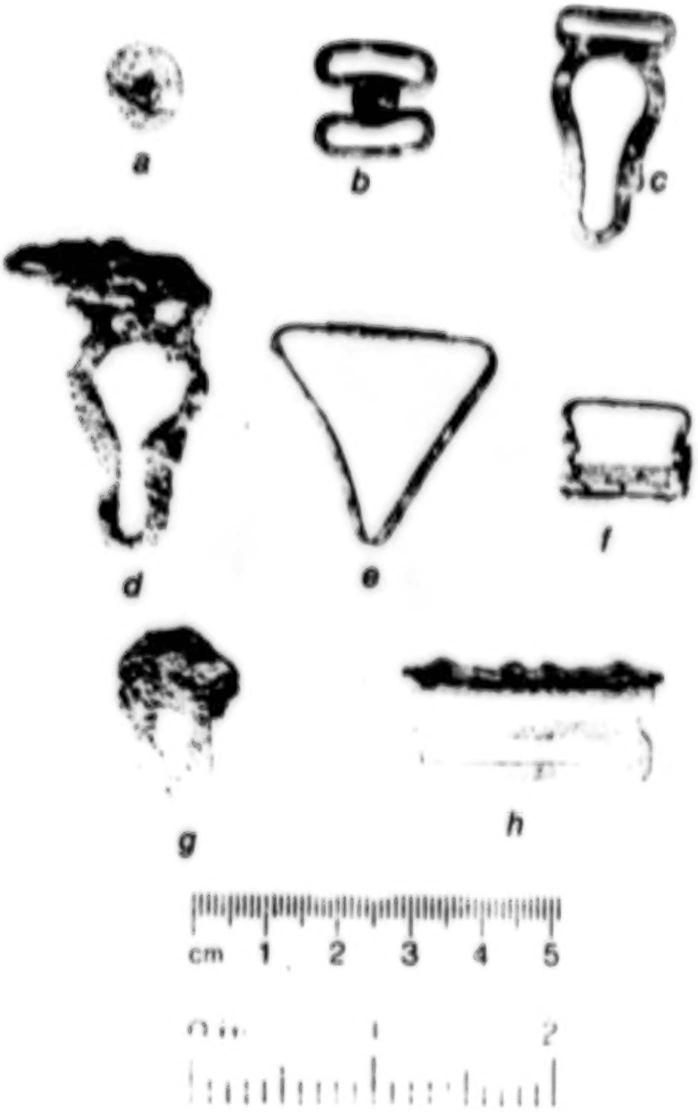

Figure 5.80: Assorted metal fasteners
a. yellow metal snap
b. yellow metal strap buckle or supporter part
c. yellow metal garter fastener
d. ferrous metal garter fastener
e. triangular yellow metal fastener
f. yellow metal sliding buckle fastener
g. white metal sanitary belt fastener
h. yellow metal suspender buckle

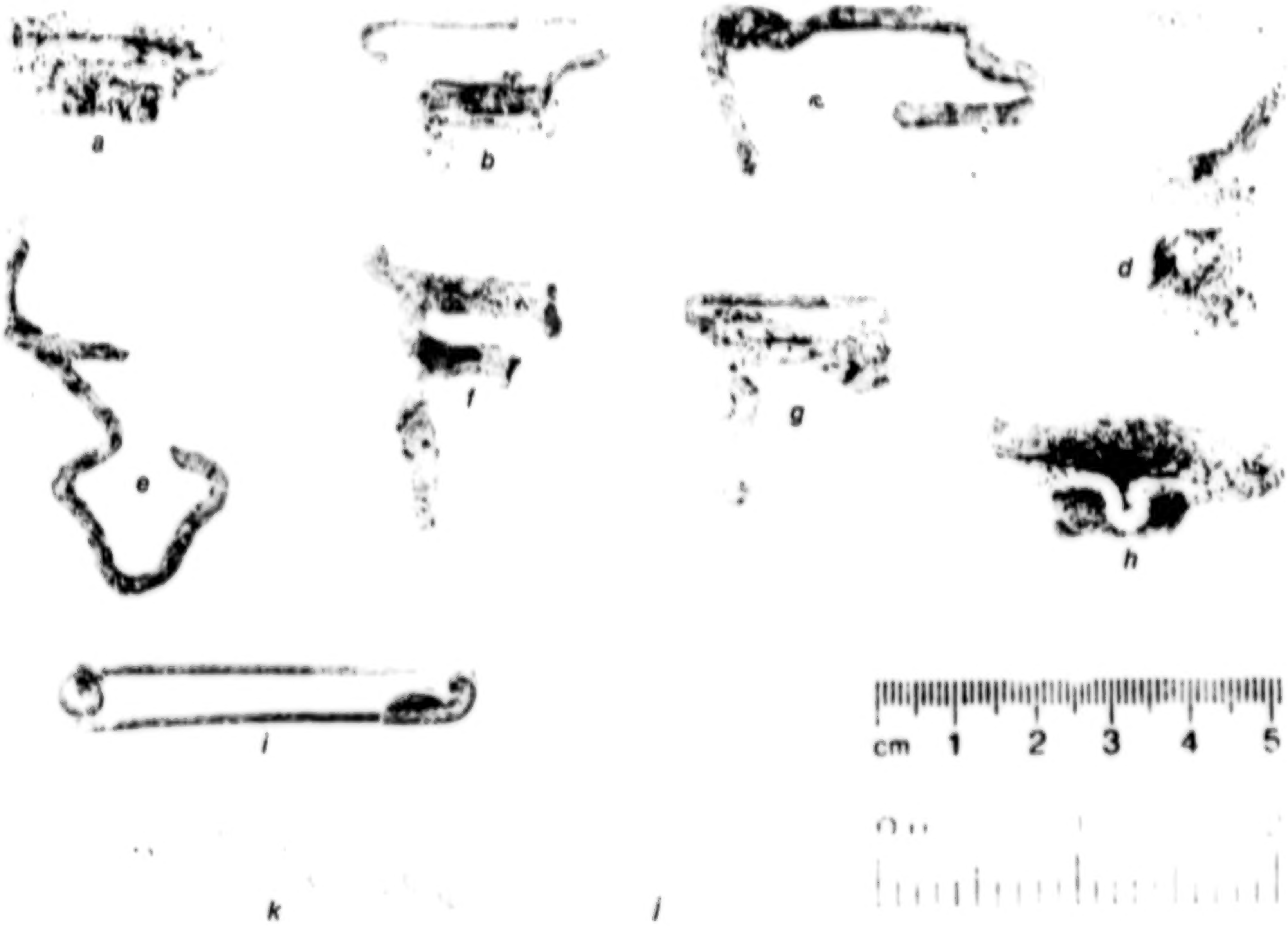

Figure 5.81: Miscellaneous metal fasteners and clothing accessory parts a) ferrous vest or undergarment fastener b) ferrous vest or undergarment fastener c) ferrous overall fastener d) ferrous fastener e) ferrous overall suspender fastener f) ferrous overall suspender fastener g) ferrous vest, undergarment, overall fastener h) ferrous fastener i) yellow metal safety pin j) celluloid collar stay k) heavy yellow metal belt prong

5/8 inch to 9/16 inch or less in length. A yellow metal two-piece snap (diameter 9/32 inch) with a shank on the back which resembles a raised crown or rosette was found in test trench 21-C.

Buttons of various types were found in the Gold Rush trash deposits (Figures 5.82, 5.83, and 5.84). These items are made of shell, bone, ceramic, glass, and ferrous, white and yellow metal. There are several sizes and types of shell buttons. These range from a 9/16 inch diameter 4-hole sew-through item with a flat back and a wide, slightly recessed center panel (Figure 5.83a) to a small 2-hole sew-through button measuring about .345 inch in diameter with a fairly smooth back and slightly concave area around the drilled holes (Figure 5.83d).

One of the shell buttons is a dark grey; the color may have resulted from secondary staining from adjacent substances in the trash deposit (Figure 5.83c). It is possible too that this item may be a very dark "smoked pearl" button, described as "very stylish for white waists and other trimmings" (Sears Roebuck 1969:940).

"White pearl dress buttons, flat, 2 holes" were readily available in nineteenth century mail order catalogs (Montgomery Ward 1969:85). The term "pearl button" is used generically by collectors and in period catalogs, for buttons cut from the "nacreous iridescent lining of the shells of sea creatures. . ." (Albert and Kent 1949:58). The mass-produced shell buttons of the late nineteenth century were first cut as blanks by tubular saws. A boring lathe then cut all the holes at once (Albert and Kent 1949:58-60). The tiny centered indentation on the grey pearl button marks the centering hole from the boring lathe. Both styles of pearl shirt buttons are shown in the Montgomery Ward catalog for 1895 (1969:85).

A yellowed, stained bone button with two large sew-through holes was also part of this collection (Figure 5.83e). It is bi-convex, 19/32 inch in diameter, and highly polished. On both sides the drilled holes taper inwards, becoming smaller at the center suggesting they were drilled from both the face and the back.

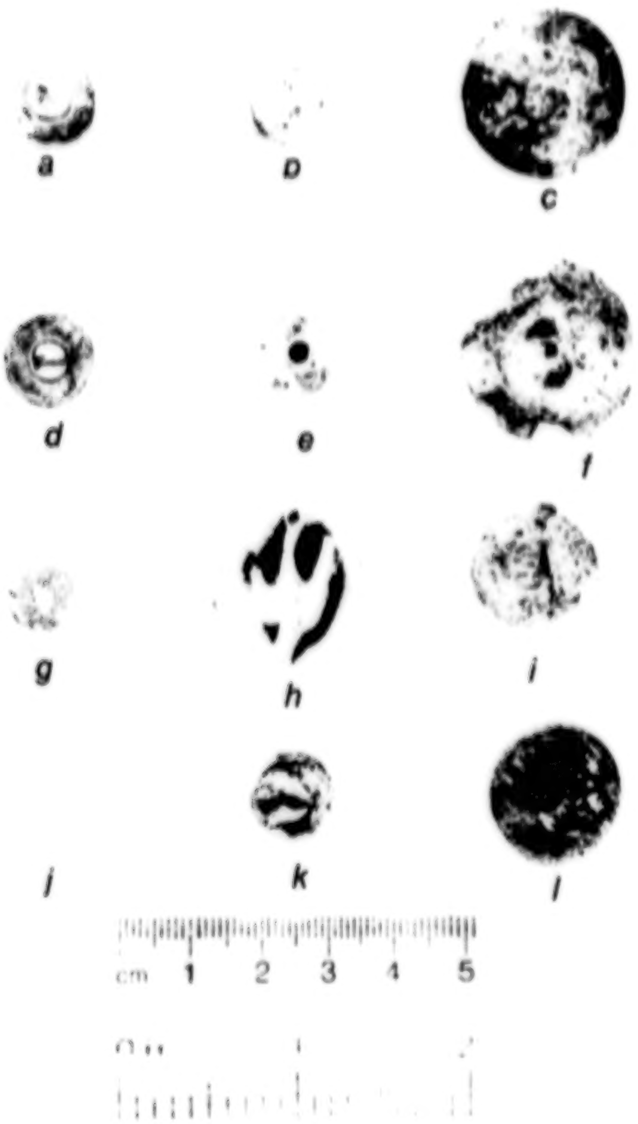

Figure 5.82: Assorted metal buttons
a) white metal button with stamped star in center
b) yellow metal overall button
c) ferrous two-piece dome button
d) yellow metal two-hole sew-through button
e) yellow metal overall button back (?)
f) ferrous button back
g) yellow metal overall button
h) yellow metal one-piece decorative button
i) ferrous two-piece (?) button
j) fragment of white metal sew-through button
k) ferrous and white metal two-piece button
l) ferrous-backed cloth-lined button

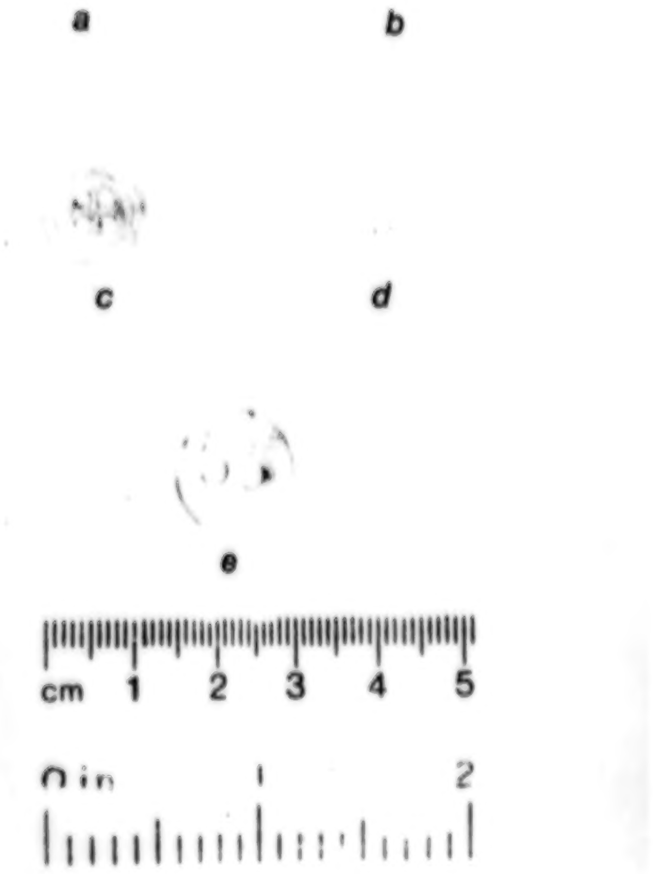

Figure 5.83: Shell and bone buttons
a. large four-hole sew-through shell button
b. two-hole sew-through shell button
c. four-hole sew-through shell button
d. small two-hole sew-through shell button
e. large yellow two-hole sew-through bone button

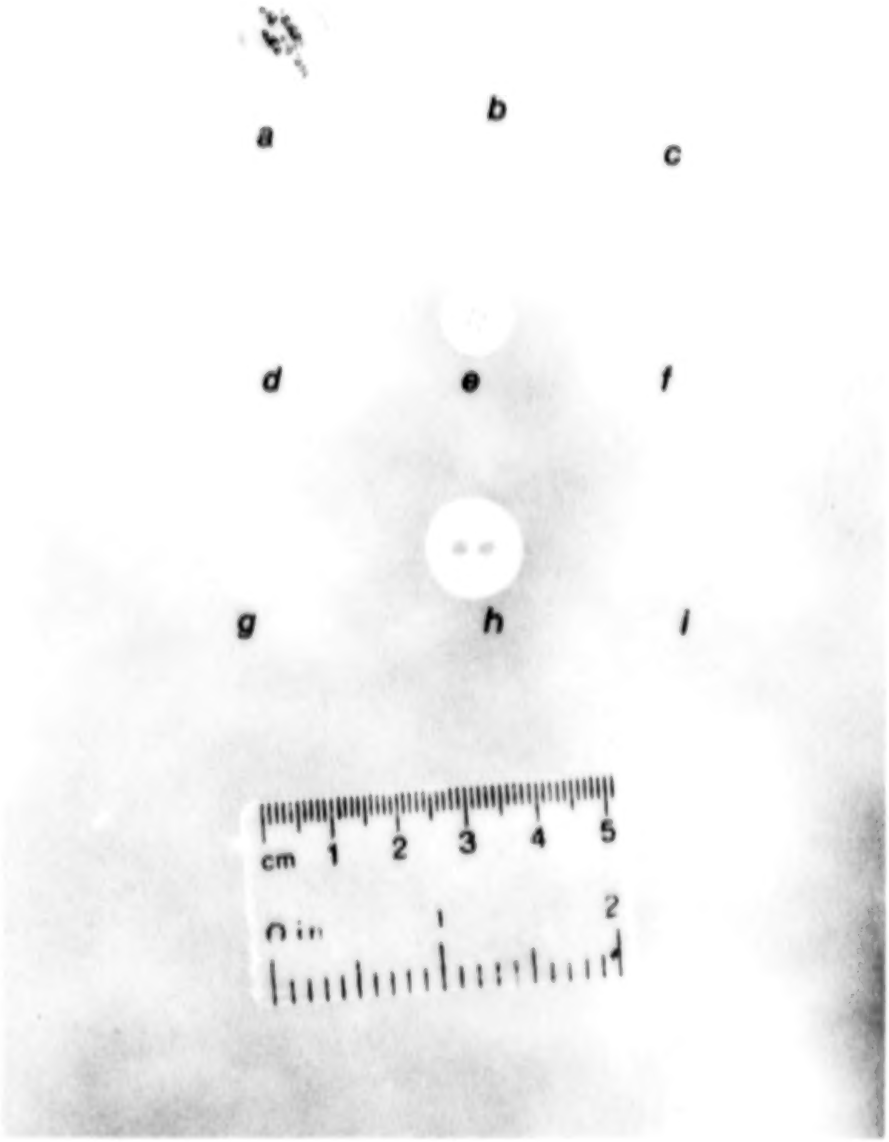

Figure 5.84: Glass and ceramic buttons

a. clear glass button face
b. small Prosser four-hole sew-through
c. large Prosser four-hole sew-through
d. large collar or cuff stud
e. small Prosser four-hole sew-through
f. partial Prosser four-hole sew-through
g. small collar or cuff stud
h. Prosser two-hole sew-through
i. Prosser four-hole sew-through

A number of ceramic buttons are included in the Peniel Mission collection. These range from a large size (size 30, 22/32-inch in diameter) Prosser 4-hole sew-through with a convex back and a modestly convex panel front (Figure 5.84c) to smaller but similar items found in the post-1900 strata (Figure 5.84b and e). This type of button was first manufactured by Richard and Thomas Prosser in 1840. Although competition due to patent infringement soon forced them out of business, this type of ceramic button still bears their names. The typical Prosser button has a slightly convex front and back, with a central depression in the front which contains the sew-through holes. These simple ceramic buttons are generally plain white, and used for utilitarian purposes: ie. underwear, work shirts, house dresses, etc. (Storm 1976:116-118). The buttons found in the Peniel Mission excavations have the tiny, everpresent, mold-caused indentations surrounding the sew-through holes in the base that are diagnostic of the Prosser button.

Judging by the large assortment of detachable collars and cuffs advertised, collar buttons and shirt studs were a popular item in the turn of the century mail order catalogs (Montgomery Ward 1969:91-93, 171). Two white ceramic collar buttons or shirt studs were found in the Gold Rush period strata (Figure 5.84d). The face of most of the studs found in the Peniel Mission excavations has a series of concentric grooves around a centrally located hole that extends down into the necked/shanked area.

It is possible that such studs were also used by the military in Skagway. The Army Quartermaster General's specifications for military apparel includes a removable linen collar with similar collar buttons used to keep the collar in place. White "pearlized" shirt studs were found in military deposits at Fort Vancouver (Storm 1976:128, 132).

Only one glass button part was found in the Gold Rush deposits (Figure 5.84a). This conical-shaped, molded clear glass item has a flat back. It was probably affixed to a metal backing of sort.

Metal buttons of several types are part of this collection (Figure 5.82). Many of these metal buttons, particularly the ferrous items, were in extremely poor condition (Figure 5.82f, i, k, l).

A badly deteriorated two-piece white metal button (½ inch in diameter) found in test trench 21-B is decorated with a stamped star inside a circle in the center of the front face (Figure 5.82a). The face is slightly convex; the back is flat. The shank is missing, so the method of attachment is unknown.

No manufacturer's marks could be discerned on this item. Buttons of this size and shape were sometimes used on overalls. It is also possible that the button may have a military association, although there is no exact duplicate in the Alberts' (1949, 1977) books on buttons. Some military academies and colleges had buttons with stars on them, as did the state of Texas.

One fragment of a deteriorated white metal button, ½ inch in diameter, was found in test trench 21-A (Figure 5.82j). This is a one-pice button with a 4-hole sew-through attachment. It has a flat rim, 1/8 inch wide, with extremely rounded concave center.

A badly deteriorated two-piece button evidently once had a diagonal patterned fabric stretched over cardboard on the ferrous face (Figure 5.82l). This button may have been similar to the "Fine Covered Diagonal Mohair [or Silk] Buttons. Black Only" designed for vests, coats, or overcoats, and illustrated in the Sears Roebuck catalog for 1902 (1969:940).

A decorated yellow-metal button was found in test trench 21-C (Figure 5.82h). This one-piece (?) 7/8 inch diameter button has a dish-shaped back with the loop shank cast onto it in one piece. The front is convex with the figure of a dove cast in relief. The edge has a braided trim.

The *Seattle Post Intelligencer's* special Klondike edition recommended that miners on their way to the Klondike take with them "2 dozen each bachelor pants [buttons] and coat buttons" (21 July 1898:n.p.).

Part of the head/catch of a large yellow metal safety pin (2-1/8 inch long) was missing when found in unit 25-B (Figure 5.81i). A partial yellow metal head (does not mend) was found in the Operation 21 test trench C. Two 1-1/8 inch long yellow metal straight pins with flat heads were recovered from test trench 21-B, and a 1-inch long ferrous straight pin with a flat stamped head was found in the adjacent strata of test trench 21-C. Stamped straight pins were first patented in 1824 (Noel Hume 1974:254).

Two small fragments of rust stained, faded black-brown silk *fabric* in a fine, tight weave were found in the Gold Rush deposits. The first piece, measuring 4-½ inches by 7/8 inch in size, is cut on the bias as if for a binding or facing; one end has a selvage (Figure 5.85g). The other piece, measuring 1½ inches by 7/8 inch, has holes along the edges where it has been machine sewn (Figure 5.85f). Two tiny fragments of wool fabric were found in unit 25-D. One is a finely woven, felt-like black material; the other is a brown, coarsely woven fabric (Figure 5.85a and b).

All sorts of notions and sewing goods were readily available in Skagway during the Gold Rush years. For example, Farrar & Cleveland's "Closing out Sale of Notions" advertised "hooks and Eyes, 4 cards for 5c. . ." along with ladies kid gloves, crochet cotton, and "Laces, Doylies and Jet Trimmings" (*Daily Alaskan*, May 26, 1899:1).

Part of a man's size 9½ brown leather shoe was unearthed in excavation unit 25-D (Figure 5.86). This artifact consists of a partial upper (at the heel end), a sole (squared at the toe), and a stacked leather heel. The shoe was sewn with linen thread, the heel glued. The sole was glued over the sewn insole. At one time, the shoe evidently had tacks in the tip of the toe and along the outer seam at the ball of the

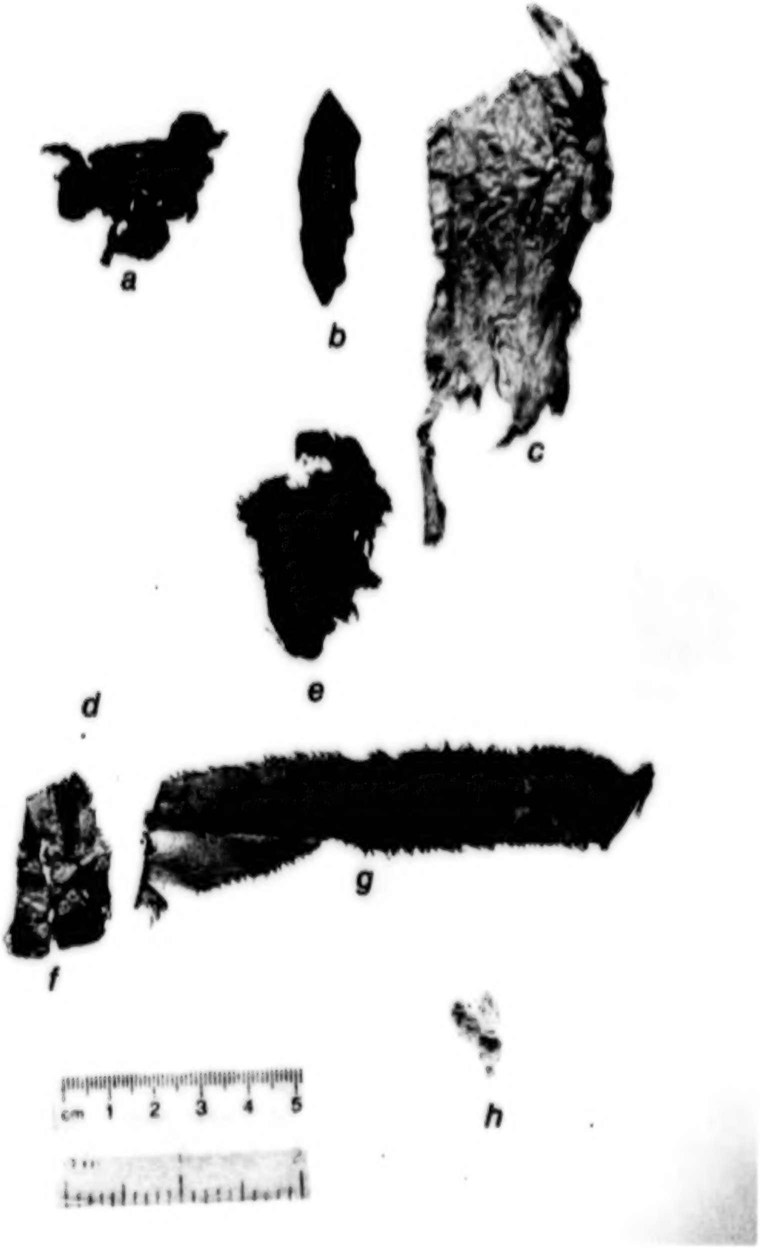

Figure 5.85: Assorted fabric pieces from the Peniel Mission excavations
a. brown coarse weave wool
b. black felt-like wool
c. black fine-weave silk
d. tan see-through nylon
e. black twill-weave wool
f. black fine-weave silk
g. black fine-weave silk
h. scrap of red wool yarn

foot; only rusted fragments remain. The square cut tacks used in the shoe heel have a flat common head. Scraps of thin, light colored insole cling to the inner part of the sole. Other pieces found with the shoe appear to be a paper and leather insert or heel liner. An "X" was cut across the front part of the sole, and a rectangular segment of leather about 1 inch by 3¼ inches in size was removed, possibly for use as a patch.

Parts of another leather shoe(s) were found in the Gold Rush deposits of unit 25-B (Figures 5.87 and 5.88a, c-f). These fragments include part of the uppers along the laced front, insoles, sole, a stacked leather heel, and tongue. This right shoe is a sturdy high-top with seven eyelets and four hook eyelets on each side. The toe of this shoe is gently squared; the double rows of machine stitching on the upper are very even and finely sewn (± 16 stitches per inch).

There are five layers to the shoe sole; from the ground up these are: a half-sole, the sole, a liner, a heavy insole, and a fine insole. A thick layer of padding, composed of leather and other organic materials, lies between the insole and the sole/heel. The half-sole is secured to the shoe by a series of small, yellow metal, irregularly-spaced cut tacks. The worn, broad, leather heel is held in place with 13-15 heavy ferrous cut tacks.

The edge of the uppers appears to be stitched to the heavy insole, then turned. The various layers were probably glued together, but the later half-sole nails hide much of the construction. Several of the tacks protrude through the insole and are cinched; despite its fine construction, the resoled shoe was probably quite uncomfortable because of the tacks rubbing against the owner's foot. Even though there was a wide range of services available to the Klondikers at Skagway, it is likely much of the shoe repair was accomplished by the owner rather than a shoemaker. Shoe nails were among the list of supplies recommended for the Klondike by a Seattle newspaper (Seattle Post Intelligencer, 21 July 1898:n.p.). The artifact may be a small man's shoe (estimated man's size

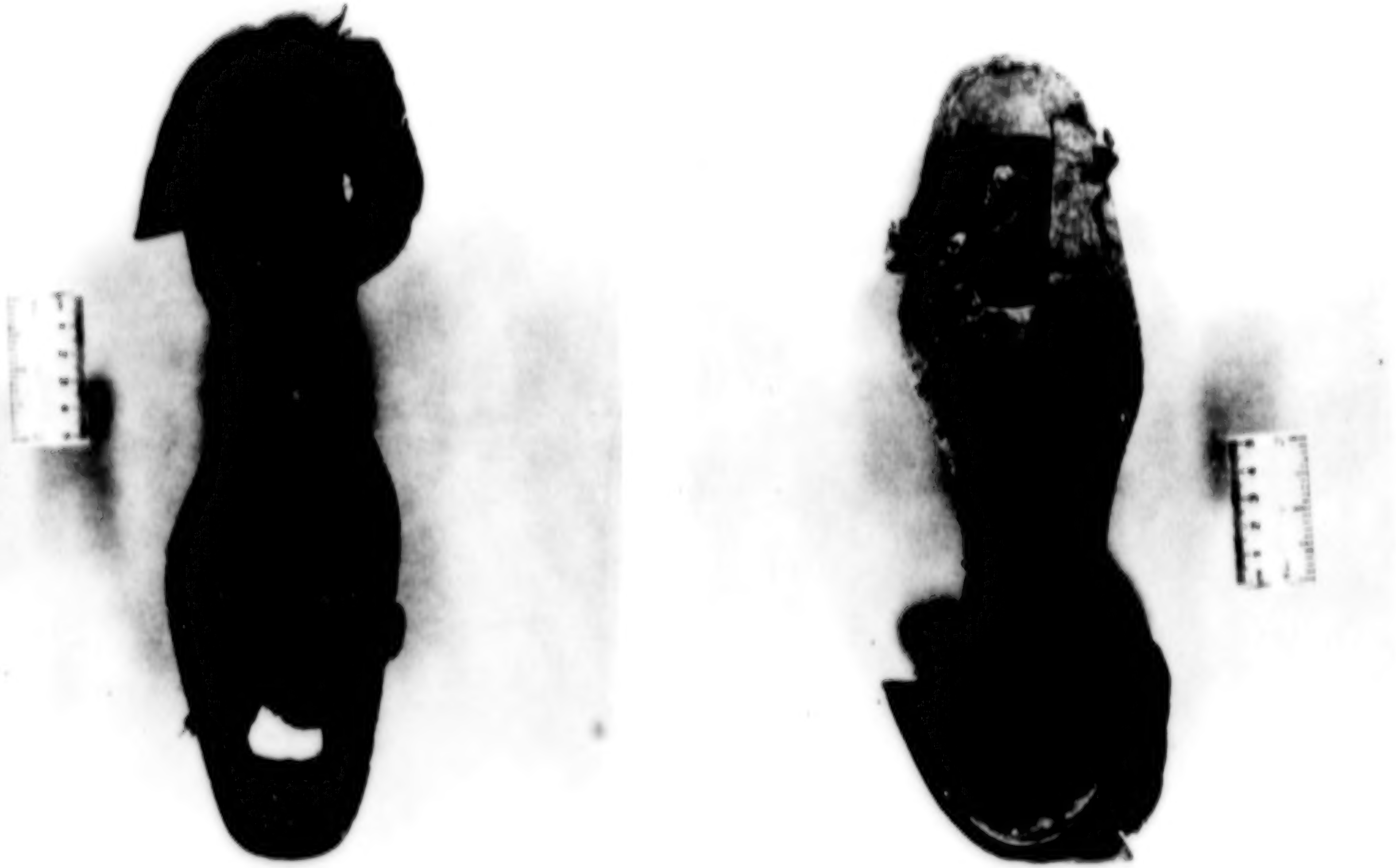

Figure 5.86: Top and underside views of man's shoe

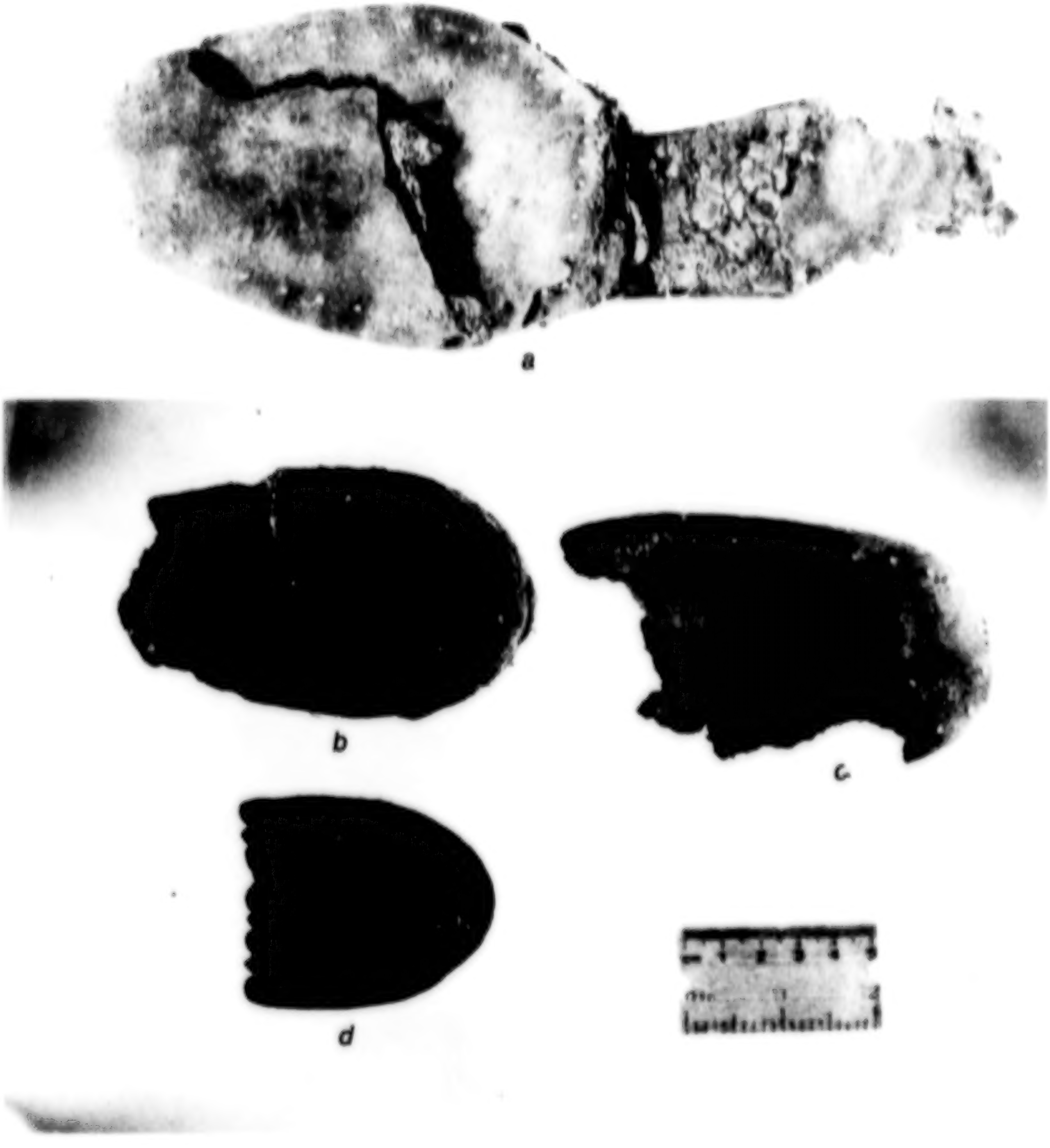

Figure 5.87: Assorted shoe parts

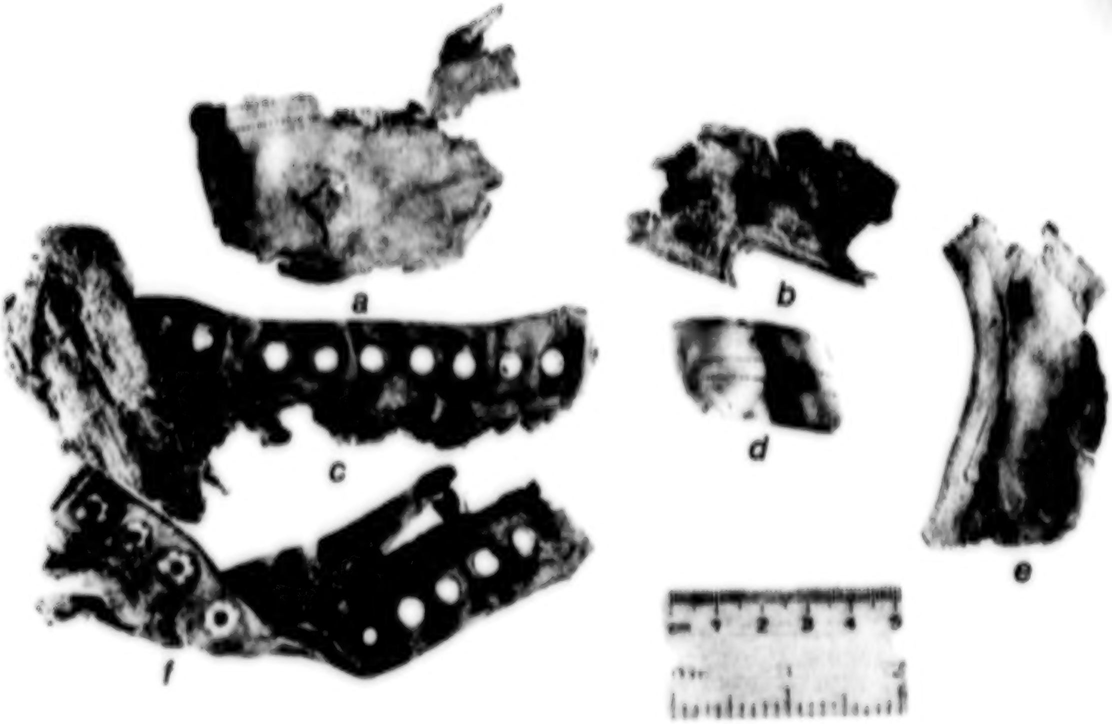

Figure 5.88: Miscellaneous leather and rubberized cloth pieces

7), similar to those advertised in the 1897 Sears catalog (1976:n.p.) as "Little Men's Satin Calf Lace Shoes" with "square toe with tip."[1]

A small, nailed leather and wood shoe heel was found in unit 25-D. Three layers of leather (upper portion of the heel) are held to the remains of a wooden heel (bottom) by 5/8-inch long wedge shaped, ferrous shanked nails or tacks with flat, common white-metal heads. There were five or more nails in the original heel; three are intact and a fourth is broken away. Judging by the size and general configuration, this heel belonged to a child's or woman's shoe.

Another partial shoe came from excavation unit 25-B (Figure 5.89). This item, made for the left foot, consists of a shoe sole with a stacked leather heel. The heel is attached to the sole with round head cut shoe nails. This is a single soled, turned woman's shoe. Turned shoes are one of the simplest methods of construction, and have been used from earliest times through to the present; today this method is used primarily for fine dress shoes. The machine stitching on this shoe extends completely around the toe; impressions from lasting tacks remain on the outside edge of the sole. Machine stitching of leather dates to about 1850, and the machine stitching extending around the toe dates to about 1861 or 1862. Footed shoes post-date the Civil War.

A partial overshoe was found in excavation unit 25-B along with fragments of the instep and uppers of a second item that was probably part of the pair (Figures 5.88b and 5.90). The fabric of the overshoe is a cloth-backed rubber. An illegible inscription is barely visible inside a circle on the instep of the badly worn corrugated sole. The overshoe measures 11-3/4 inches long; the maximum width at the ball of the foot is

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[1] Similar styles for women do not appear until after the turn of the century. Allowing for shrinkage of the leather, the shoe would probably have been a woman's size 8½ or 9.

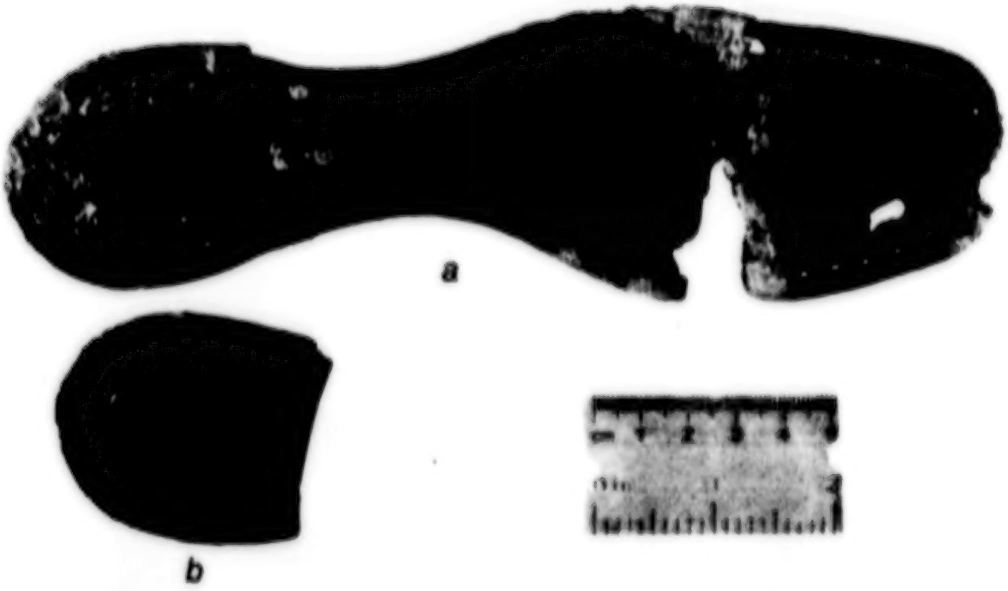

Figure 5.89: Partial woman's shoe

about 3-3/4 inches. The size is estimated to be about a 9 or 10 (man's); the overshoe is for the left foot.

Similarly made overshoes, labelled "Alaskas" or "Arctics", are illustrated in the Montgomery Ward catalog for 1895 (1969:522-523). The narrow toe of this overshoe was evidently designed to accommodate a pointed shoe, probably an "opera" or "needle" style (Sears 1976:n.p.). Most of the shoes advertised during the 1890s have decidedly pointed toes (Montgomery Ward 1969:522; Sears Roebuck:190-201). On the other hand, the 1902 Sears catalog specifies that the rounded toes of "Storm Alaskas" (overshoes) were "made especially to fit the stylish coin toe shoes" (1969:1051). The "Storm Slippers," advertised on the same page, were "made from light, first quality rubber, net lined . . . [also] in the _coin toe last_" (ibid) (emphasis added). Illustrations of shoes in the post-1900 catalogs show numerous examples of round-toed shoes and boots. It appears then that this overshoe is of the pre-1900 style.

It is possible that some of the rubberized fabric scraps could also belong to a poncho of some sort. The Army issued rubber ponchos and sheets; these were of "sheeting, coated with rubber, luster finish" (U.S. War Department 1986:240-241). Rubberized footwear and raingear was (and is) an essential part of the wardrobe for anyone in southeastern Alaska. In a special Klondike edition, the _Seattle Post Intelligencer_ recommended certain supplies for the would-be miners; these items included "4 pairs crack-proof hip rubber boots . . . 2 pairs rubber buckle shoes . . . [and] 2 pairs Huron rubbers" (21 July 1898:n.p.).

Two yellow metal hook eyelets for a shoe or boot were found in unit 25-D. These eyelets have a cut, splayed back which has been bent outward to attach them to the shoe leather. Similar items, with and without the attached shoe leather, were found in other parts of the excavations, including test trench 21-A and 21-B.

Several personal _accessories_ were found in the Peniel Mission excavations. These include the central disk-like part of an umbrella from

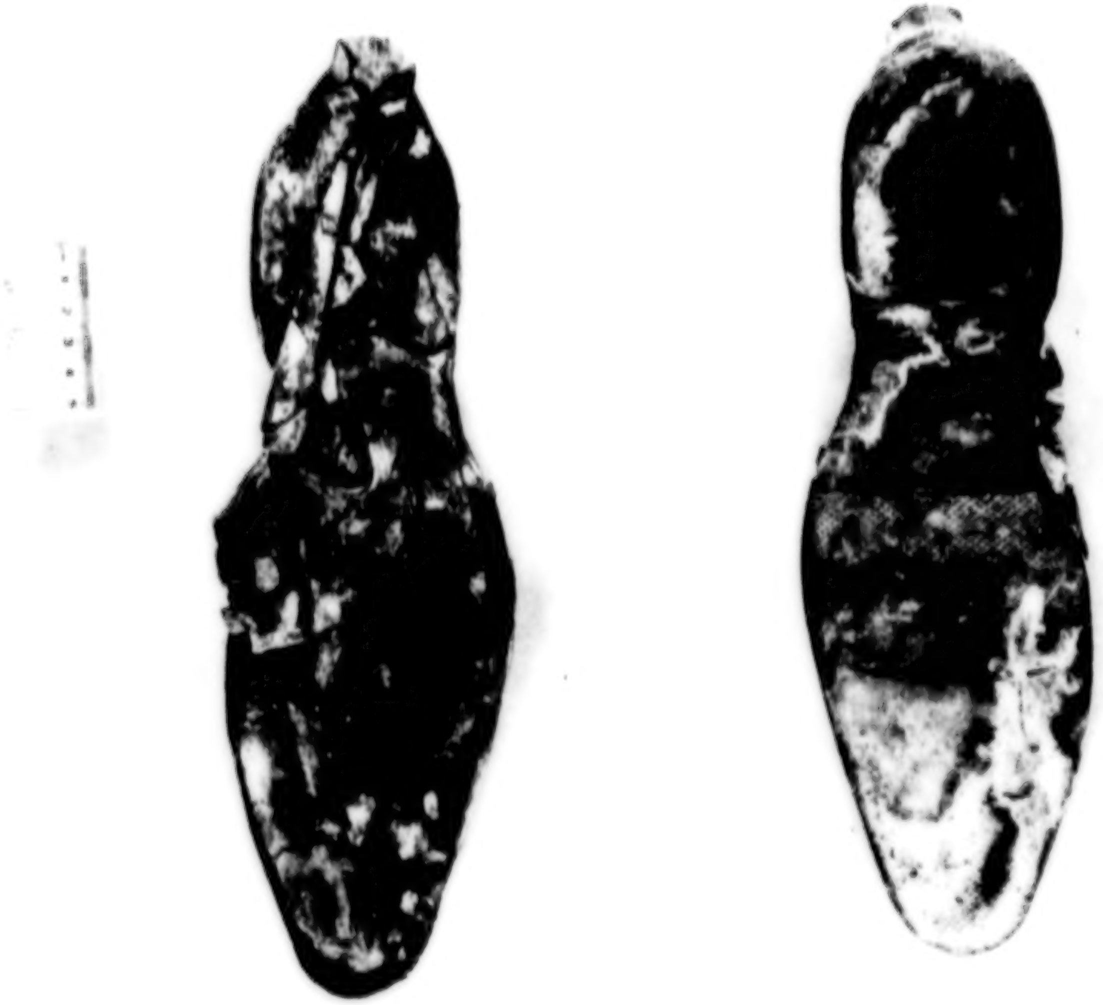

Figure 5.90: Two views of rubber overshoe

test trench 21-A. Eight spokes, broken but still in place, are rusted to the 1-inch diameter disc in an upright or shut position. Some bits of black cloth are still attached to the spokes. Six spoke fragments, with a black twill-weave cloth still attached, were found in test trench 21-B, as was a piece of the same fabric--a lightweight black twill.

Part of a purse was found in the Operation 21 test trench (Figure 5.91a). This small rectangular ferrous frame measures 6 inches by 3 inches by 7/16 inch in size. A large, black painted snap, and assorted pieces of a black rubberized fabric molded to resemble lizard skin found in one of the 1983 shovel tests may also be from the same or a similar item (Figure 5.91b).

Mixed Strata Clothing: A yellow metal suspender buckle was found in test trench 21-D (Figure 5.80h). The bottom rim is turned outward at a 90° degree angle and has rounded teeth on it. One side has "CROWN MAKE" stamped on it in cursive script.

Post-1900 Clothing: A small perforated white rubber button/tab from a garter fastener (garter belt or supporter) was found in unit 25-A. A small yellow metal buckle (5/8 inch by 3/4 inch in size) with a post for a rubber button/clasp fastener on the back was found in unit 25-A (Figure 5.80b). It is probably a part of a garter/hose supporter, but similar items are also used on other items of clothing. For example, children's slip-on rubber boots have similar buckles that are used to tighten the ankle straps and prevent slippage.

Two ceramic collar buttons or shirt studs were found in the post-1900 strata. These one-piece, double ended, shanked items were probably used for a detachable collar. The small, white 4-hole Prosser ceramic buttons found in the uppermost strata, one in excavation unit 25-A and the other in unit 25-D, are a number 16, .39 inch in diameter. Their small size suggests these buttons may have been used on underwear, children's clothes, etc.

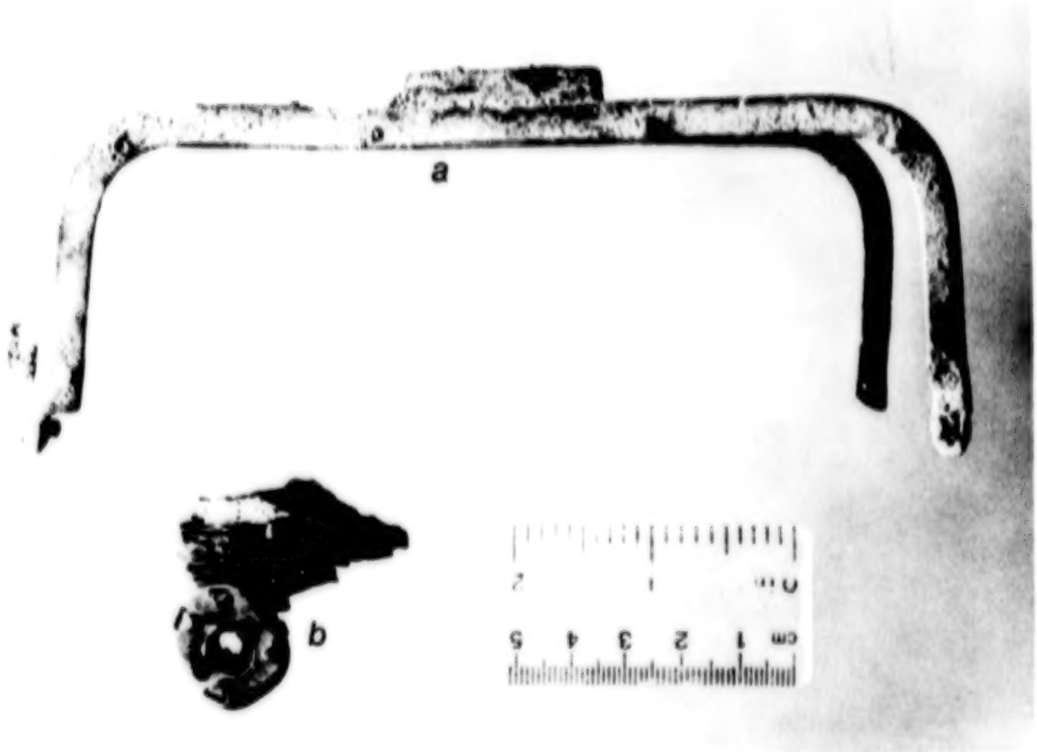

Figure 5.91: Purse frame, snap, and fabric

Two plastic buttons were found in the twentieth-century deposits of the Operation 21 test trench C. The first, a fragmentary, red plastic, sew-through, one-piece button, has a flat back, and a slightly rounded front with a recessed center. The other item is a one-piece two-hole sew-through button with a flat back. It is 7/16 inch in diameter, has a rounded edge with a mold seam around the perimeter and a beveled edge on the front face. The recessed center also has a rounded edge.

Several badly corroded metal buttons and button parts were found in the post-1900 levels. These items include the partial back from a two-piece ferrous button with a concave exterior, a broken away shank and a flat band around the perimeter (Figure 5.82f); a ferrous, dome-shaped 2-piece (?) shanked button with a sharply concave back (Figure 5.82c; and a two-piece ferrous button with a slightly domed face and a flat back (Figure 5.82i). The latter button has a circular concavity about 3/16 inch across on the face; the shank area is obscured by rust. A possible ferrous button part, ½ inch in diameter, was found in the Operation 21 test trench A. The face is very rounded and convex; the back piece is missing, and the attachment type is unknown. Presumably, this was a two-piece button with the front piece lapping over the back.

A machine-stitched knife sheath was found in the Operation 21 test trench B (Figure 5.92). This small leather sheath (4-¼ inches long by 7/8 inch wide) is held together by gilded ferrous rivets. Its small size suggests it held a small personal knife such as a pocket or pen knife, rather than a large hunting knife.

Unit 25D, Disturbed Strata: Two pieces of shoe leather were found in this stratum. One item is a small round fragment surrounding a .2 inch wide white metal eyelet for the shoelace. The one-piece eyelet has a smooth flat flange on the interior; the exterior is slightly splayed outward over the leather (Figure 5.93). Faintly impressed on the back of the eyelet on the flange area are the letters "*GIC^{O} * OIC" (the asterisks represent five point stars). The manufacturer is unknown.

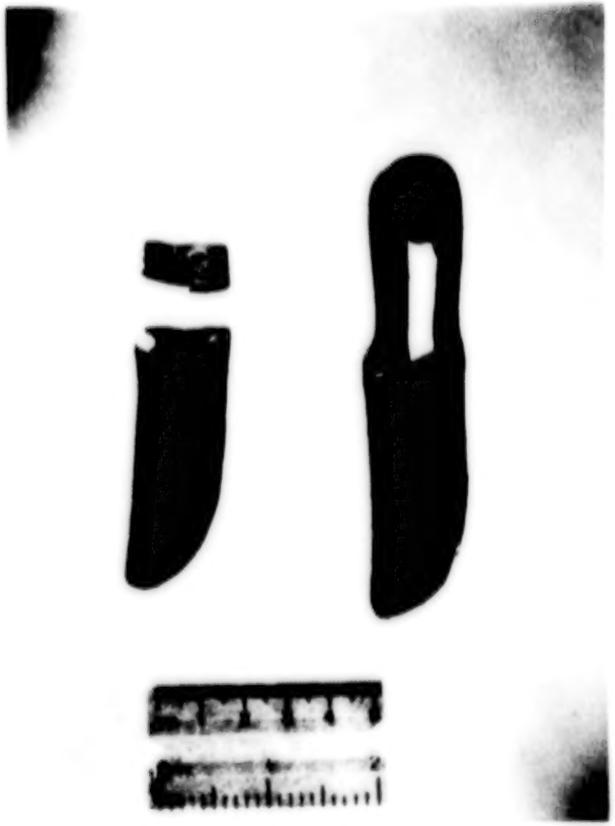

Figure 5.92: Machine sewn leather knife sheath

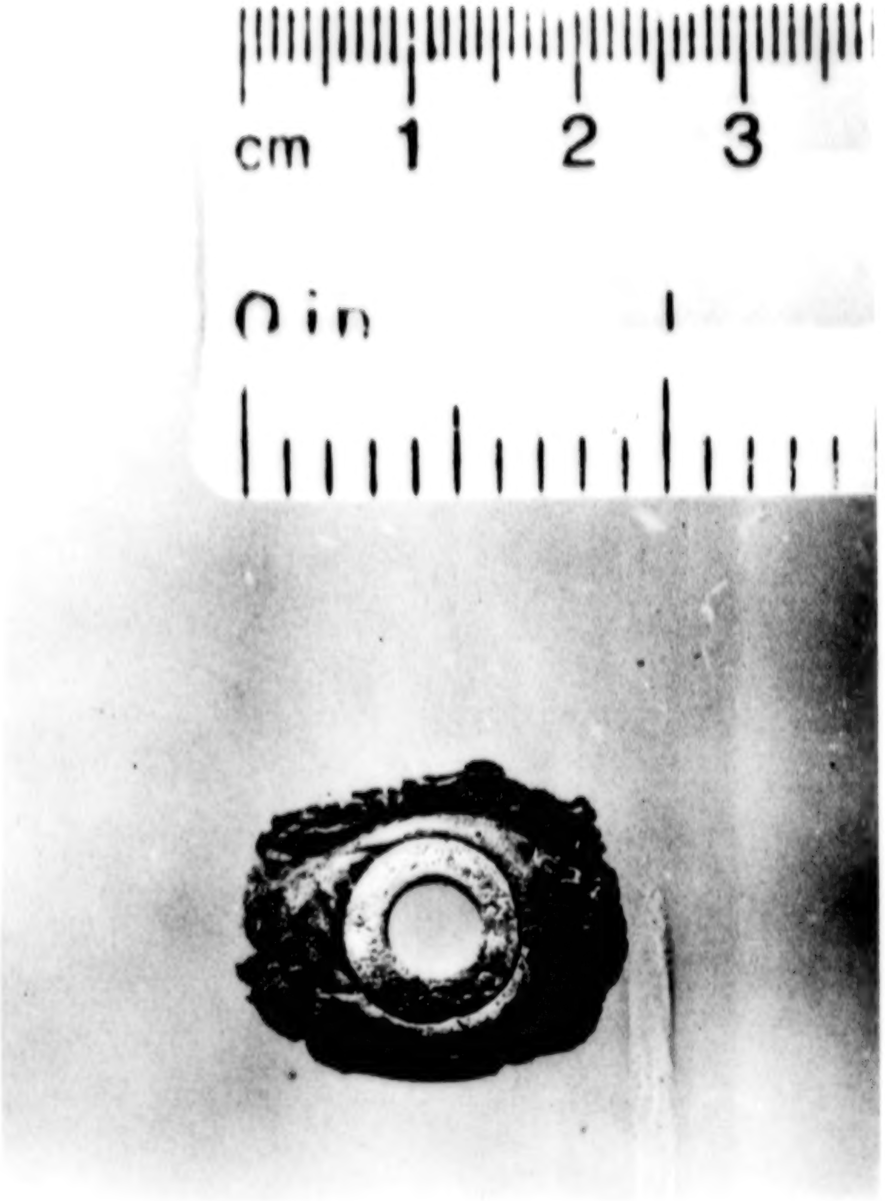

Figure 5.93: Shoe eyelet

A badly corroded yellow metal shanked and backed button or fastener found in stratum D may have been made in two pieces (Figure 5.82b). It is ¼ inch thick; one face is 7/16 inch in diameter and the other is 3/8 inch across. This item resembles the type of button used on overalls.

A 4-hole white ceramic Prosser sew-through button, a size 18 (.45 inches in diameter), was found in stratum D of unit 25-D. The back is slightly convex; the front has an indented center on a slightly convex face. In the Montgomery Ward catalog for 1895 these "agate" buttons sold for 3 cents a card; each card contained one gross (Montgomery Ward 1969:85).

A ferrous and yellow metal two-piece sew-through button was found in stratum D (Figure 5.82d). The cut-away center portion of this ½-inch diameter round button is bisected by a straight wire which serves as a shank. The bordered yellow metal face has a basketwork design which may have been laquered; the back, of which little remains, is ferrous.

Two ferrous wire fastener fragments were found in this stratum. Also found in this unit/stratum was a yellow metal belt prong. One end is bevelled on two directly opposite sides to facilitate hooking into the holes in the belt. The other end is bent around 180 degrees in a loop. This item is 1-7/8 inches long and .175 inch in diameter.

Shovel Tests Clothing: In level 2 of shovel test 29-A, there were 2 fragments of shaped leather that had been smooth finished and dyed a light brown on one side. They appear to be fragments of a leather insole from a heavy shoe or boot.

GROOMING AND HYGIENE CLASS

Gold Rush Grooming and Hygiene: Some of the fragments of milk-glass cosmetic containers and/or dresser sets found in the Peniel Mission excavations are illustrated in Figure 5.94. An assortment of milk glass fragments totalling seven items came from the trash deposits. Of three body fragments, one is painted in a yellow and green floral design (Figure 5.94l). Portions of lids include one round-rimmed, one angular-rimmed, and one angular item with a shallow, narrow flange on the lower portion of the rim (Figure 5.94j,k,m).

Another piece, a 2-1/8 inch diameter flat milk glass lid, has a gently rounded rim, and a 1-1/16 inch flanged underside to fit onto a circular container. A small (½ inch) circular depression on the top may be decorative, or could have been used for a handle attachment (Figure 5.94b). A second round lid has a deep flange on the underside (Figure 5.94a). Presumably the flange fit inside a jar or container to form a loose seal. The numerals "380" are embossed on the interior on the slightly concave lid.

A 6⅛-inch long bone toothbrush handle was found in the trash deposits of the Operation 21 test trench C (Figure 5.95a). Holes for three rows of bristles are arranged in an alternating pattern. The brush end is 2-⅛ inch long; in width it tapers from 7/16 inch at the base of the handle to ⅛ inch at the tip. Fragments of two bone toothbrush heads were also found in this area. Each has four rows of holes for the bristles, and tapers slightly towards the end.

The head of another bone toothbrush was found in unit 25-B (Figure 5.95b). This 2-½ inch long item which measures ½ inch wide by 2 inches thick has been broken just below the bristles at the taper in the handle.[3] The bristles are missing; originally there were four rows, with 22 sockets in each of the two outer rows, and 23 in the two center rows. The drilled sockets do not extend through to the back of the bristle end, so the bristles must have been glued in place. In profile the item is slightly

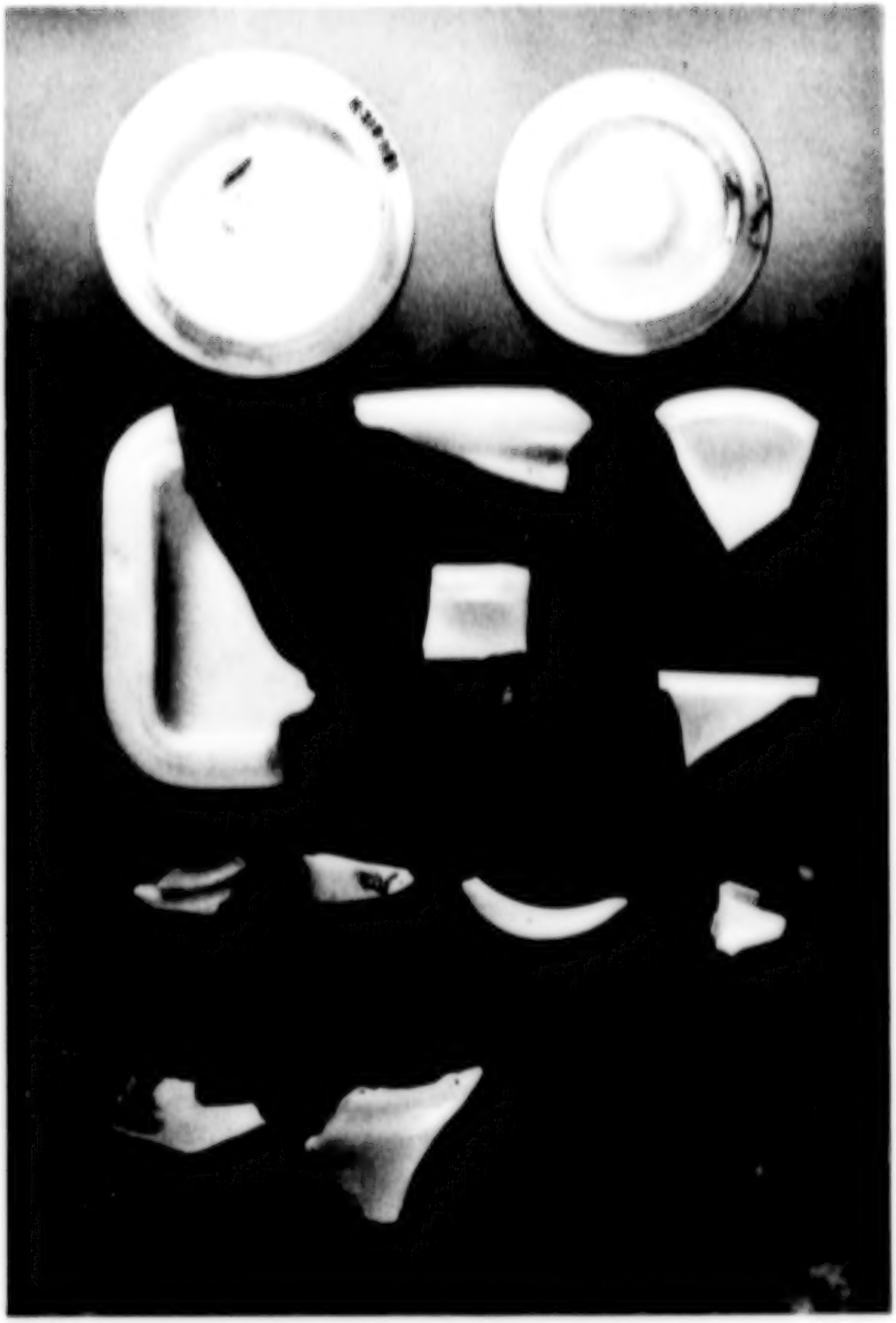

Figure 5.94: Assorted milk glass lids and sherds

a. lid
b. lid
c. angular lid sherd
d curved vessel rim sherd
e. curved lid sherd
f. angular vessel rim or lid sherd
g. angular vessel rim or lid sherd
h. ground rim sherd
i. hand painted green trim on body sherd
j. curved vessel rim sherd
k. angular vessel rim (?) sherd
l. hand painted yellow and green trim on curved body sherd
m. curved vessel rim sherd

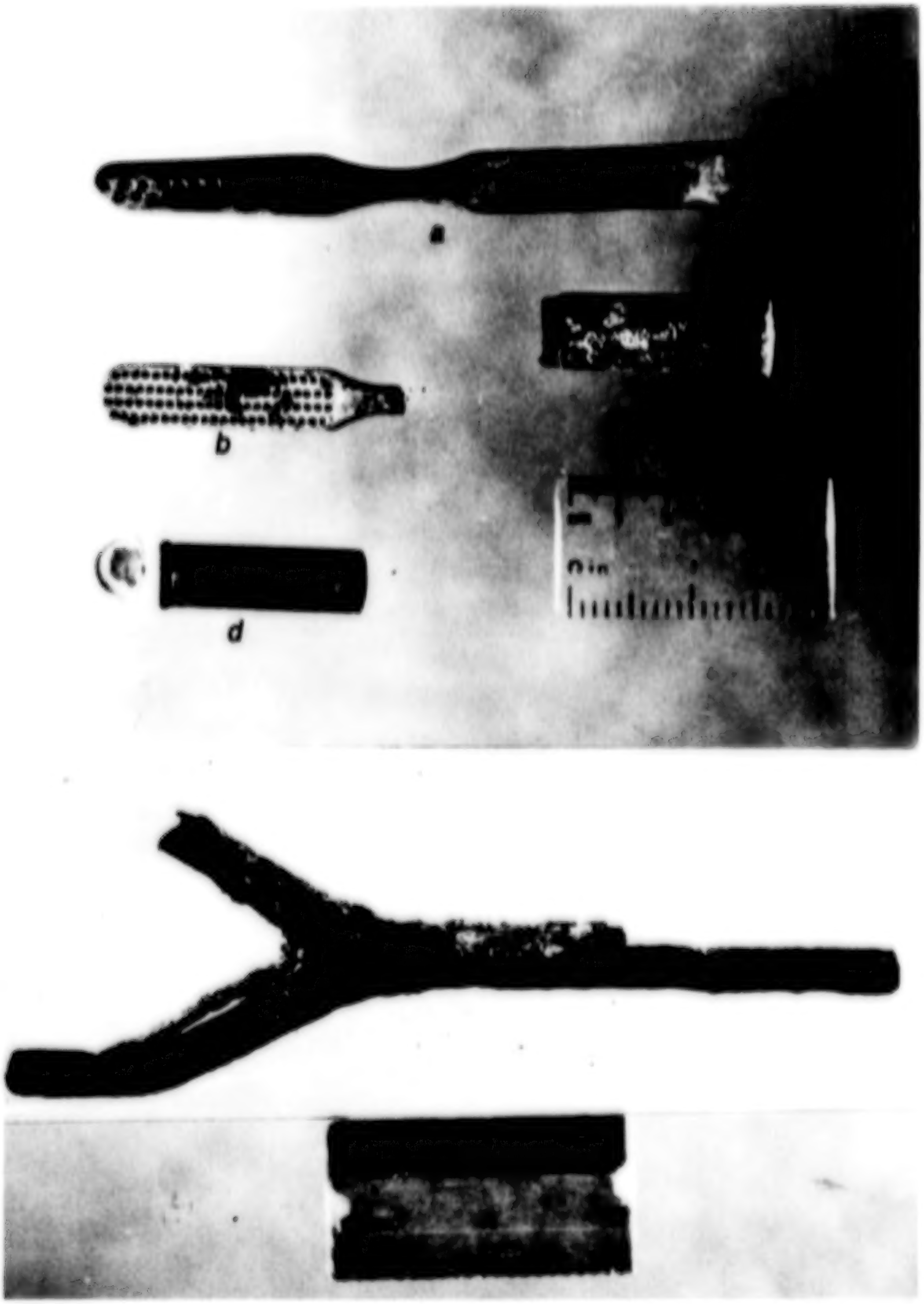

Figure 5.95: Assorted personal grooming items

a. bone toothbrush
b. bone toothbrush head
c. yellow metal Neuschaefer lipstick case
d. yellow metal lipstick case cover
e. ferrous curling iron part

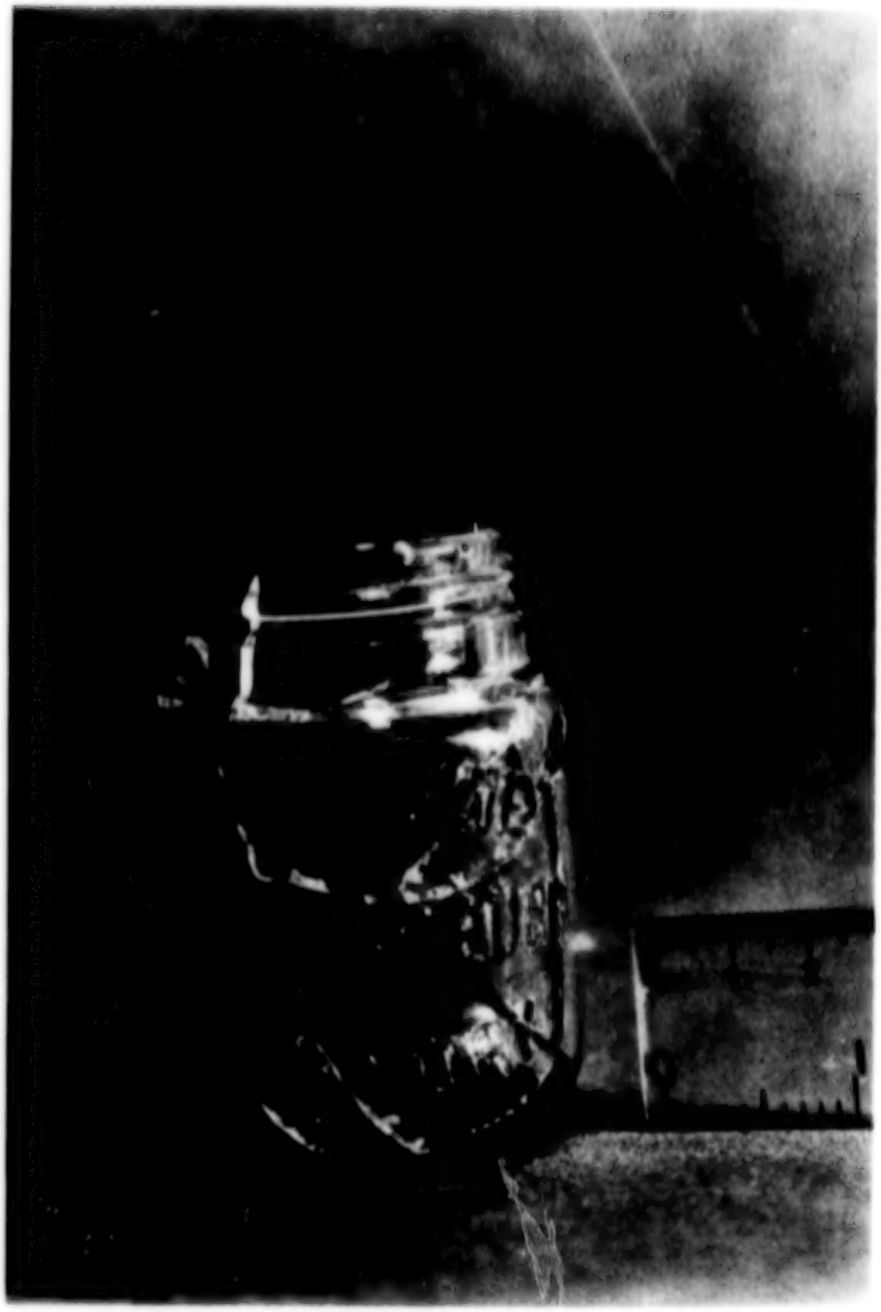

Figure 5.96: Vaseline jar

curved upward at the tip and at the handle end. It is identical to a toothbrush shown in Berge (1980:284). In 1902, "A Good Four-Row Tooth Brush, good bristles, nice white handle" could be purchased from the Sears Roebuck catalogue for 4 cents (1969:462).

Twenty-two colorless glass sherds mend to form a Vaseline bottle (Figure 5.96). The embossed label on the front of the bottle reads "VASELINE / CHEESEBROUGH / NEW YORK." "Vaseline" was registered as a trademark to the Cheeseborough Manufacturing Company in 1878. It was not until 1887 that it was sold retail in small volumes; previous sales had been large volume wholesale (Herskovitz 1978:14).

The bottle has a mold-formed screw finish neck. The formation of the body is somewhat of a puzzle. The bottle has a vertical mold seam on one side, with the mold seam running completely to the top of the bottle. On the opposite side of the bottle is a partial vertical seam on the neck finish only. The most likely explanation is that this bottle was made in a semi-automatic machine by the "press and blow" process where the glass was pressed into the mold to form the lip and mouth first. Air pressure, created by a metal plunger inserted through the mouth of the vessel, was then used to shape the body (Berge 1980:75). This process was invented in 1892, and was in fairly successful operation by 1896 (Ibid).

Part of a ferrous curling iron was found in unit 25-D (Figure 5.95e). This 6-inch long item has a maximum diameter of about 1/2 inch. The end of one of the handles is missing, and the bottom portion is badly exfoliated. A flat ferrous strip nested inside the "Y" of the handles served as a spring to keep the iron shut over the hair curl. Similar curling, waving, and crimping irons for hair and for mustaches were advertised in the 1895 Montgomery Ward catalog (1969:128).

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3. This appears to be a fairly common breakage pattern; see Herskovitz 1978:130, and Berge 1980:284.

Post 1900 Grooming and Hygiene: A few fragments of milk glass were found in the post-1900 strata. Most were too small to determine their original configuration or function. However, some items appear to have come from cosmetic jars and dresser sets.

The top to a yellow metal lipstick case found in unit 25-A has curvilinear impressed designs running along the long axis. It is of the pull-apart variety with a swivel base. The top has a small indented "cup" filled with red paint, no doubt to indicate the color of the lipstick (Figure 5.95d).

The base of another lipstick case, found in the upper strata of Operation 21 test trench B, is made of gilded ferrous metal. This 1-3/4 inch long by 3/4 inch diameter tube still has remnants of red lipstick inside.

Lip coloring has been used for centuries, but the advent of lip coloring in the United States was heavily influenced by several factors. Early in our history, Puritan New England banned makeup on moral grounds. However, the southern colonies were more lenient, and "cosmetics flourished" there (Encyclopedia Britannica 1973:6:565). By the 1800s the American cosmetic industry relied quite heavily on European developments. French women had been using makeup

> . . . long before it was accepted in polite society in England or America. It was not until after World War I that barriers were lowered and prejudices were gradually discarded; even then the use of cosmetics was sporadic and limited. . . (ibid).

The relatively late acceptance of lipsticks in the United States accords well with the twentieth century date of the deposits.

Unit 25-D (Disturbed Strata) Grooming and Hygiene: Milk glass from this stratum includes portions of what may be a continuous thread lip or decorative grooved lip with a ground rim (Figure 5.94h). One body fragment has a painted green floral design. Parts of the same/similar item were found in the trash deposits of stratum E, this unit.

Shovel Tests Grooming and Hygiene: A partial milk glass cosmetic container lid was found in shovel test 29A (Figure 5.94c). This angular item has rounded corners and a shallow flange on the underside to fit down into the container.

A yellow metal lipstick tube was found in level 2 of 1983 shovel test 20-G (Figure 5.95c). The tube, missing the cover, is two inches long. The head is stamped with letters which read . . . EN NEUSHAEFER INC. -MADE IN U.S.A. The side of the case is also stamped with Neuschaefer. The part of the case that holds the lipstick is ferrous rather than yellow metal, and has a small square notch in it. The Helen Neushaefer cosmetic company is listed as part of the Supronics Corporation in New Jersey. However, no further information could be found on this company.

PERSONAL ORNAMENTATION CLASS

Gold Rush Personal Ornamentation: Recovered from the lower levels of excavation unit 25-D were three pins. The first pin holds a simulated pearl on a straight yellow metal shank and is approximately 1-3/8 inches long (Figure 5.97g). Similar items are pictured under "BEST QUALITY ROLL PLATE SCARF OR STICK PINS" in the Montgomery Ward catalog for 1895 (1969:172).

The second has a white metal (lead/lead alloy) head fastened to a ferrous pin (Figure 5.97h). On the slightly convex, round face is what appears to be an embossed spread eagle perched on a leafy branch; the back bears the legend "C H I & C$^{\underline{o}}$". This manufacturer has not been identified.

Another stick or scarf pin came from unit 25-B (Figure 5.97f). The 1-3/4 inch long artifact has a round to oval ferrous metal "tab" on a white metal pin. It is similar to the little rolled metal scarf and stick pins illustrated in the Montgomery Ward catalog which were "very popular with ladies as well as gentlemen. They are worn by ladies in the same manner as an ordinary brooch pin" (1969:173).

An oval, concave item of ferrous metal found in unit 25-B appears to be half of a small locket (Figure 5.97b). However, it is too badly corroded to be able to identify with any measure of confidence. "rolled plate" lockets in various styles were a popular item in the 1895 Montgomery Ward catalog (1969:168).

Four flat fragments of soft, pliable white metal with decorative scalloped edges were found in test trench 21-C. One piece has a cast design which resembles an insect or totem figure. This may be part of a bracelet or other personal ornamentation.

Post-1900 Personal Ornamentation: A long, bone-colored plastic tube bead was found in stratum B of the Operation 21 test trench B (Figure 5.97a). In cross section, it resembles a truncated circle. The center hole is cut away in a scalloped floral pattern. The bead is made in one piece and the edges lap together on flat edge, creating a seam. The flat edge also has numerous parallel striations which resemble cut or gnaw marks. This bead may have been created for the tourist trade, made to resemble Native-American craft.

Note: The American Legion emblem pictured in Figure 5.97 was found in the file soils of unit 25-C. Its source is unknown. However, the Skagway Legion unit no. 7 received their charter on May 20, 1949 (Fouch 1986).

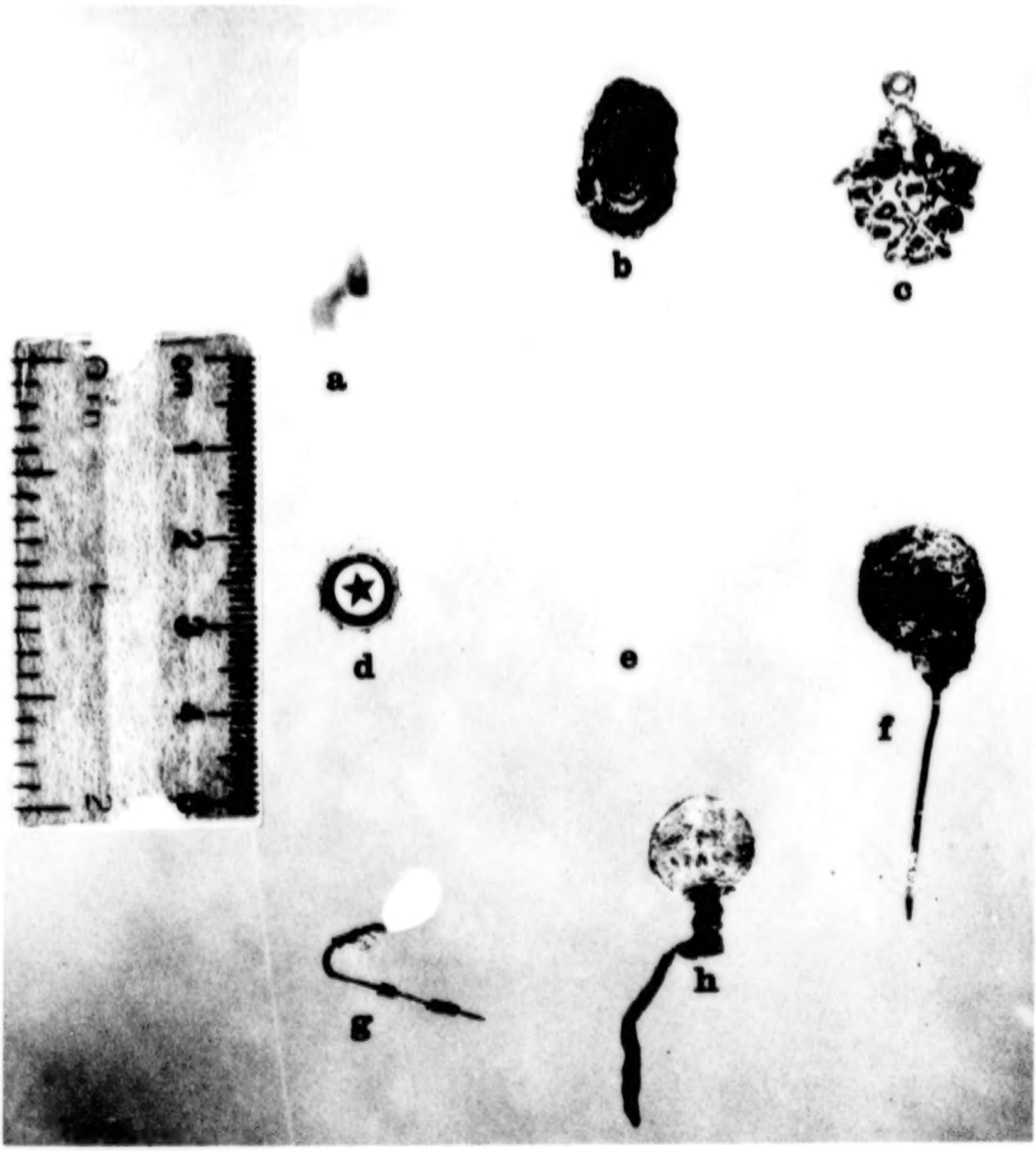

Figure 5.97: Miscellaneous personal ornamentation artifacts
a. plastic bead
b. ferrous locket part(?)
c. white metal charm or necklace part
d. American Legion Auxillary emblem
e. plastic bead
f. ferrous and white metal pin
g. yellow metal and glass (simulated pearl) pin
h. white metal and ferrous pin

ACTIVITIES GROUP

Several specialized activities are represented by the artifacts found in the Peniel Mission excavations (Tables 5.25 and 5.26). These activities include Bulk Storage, Holiday, Hunting and Warfare, Military, Miscellaneous Tools, Printing, Surveying, Transportation, Children, and Office Supplies.

BULK STORAGE CLASS

Only one bulk storage item was found in the Gold Rush deposits. This 6/12 inch long by 3/4 inch wide ferrous strip appears to be from a barrel hoop.

Post-1900 bulk storage items were primarily pieces of plastic bags and styrofoam packing.

CHILDREN CLASS

Gold Rush: Some of the toys and toy parts found in the Peniel Mission excavations are shown in Figure 5.97. Only one of the illustrated items is from the Gold Rush trash deposits. This 11/16 inch diameter clear glass marble, decorated with rainbow colored swirls on the interior, was found in unit 25-A (Figure 5.98d).

Post-1900: All of the rest of the children's toys came from stratum A fill soils, and are not discussed in the text. These include a spherical rubber ball found in unit 25-B. It was manufactured in a two-piece mold, and has a faint "S" curved design across one half. Other items from the late, mixed, twentieth century deposits include a wheel from a child's toy, a small plastic bottle or charm, part of a plastic pocket knife, two marbles, a plastic charm, and a small pink doll shoe with a pump heel. The majority of these items are pictured in Figure 5.98.

Table 5.25: Activity-related artifacts inventory

ACTIVITIES GROUP			FILL	GOLD	MIXED	POST	STS	STS	U25-D	TOTAL
Type	Type	Description		RUSH		1900	1983	1985	DIST.	
children	toys	glass decorated marble, colorless		1						1
children	toys	glass, blue/grey marble				1				1
children	toys	glass, swirl-decorated marble				2				2
children	toys	plastic 'paper doll' tie	1							1
children	toys	plastic charm, painted silver	1							1
children	toys	plastic doll shoe, pink			1					1
children	toys	plastic knife parts, red	1							1
children	toys	plastic spoon, small grey				1				1
children	toys	plastic toy wheel, black	1							1
children	toys	plastic, red squirt gun part	1							1
children	toys	plastic, yellow milk bottle charm	1							1
children	toys	rubber toy wheel, white						1		1
children	toys	rubber, black molded ball	1							1
holiday	tinsel	silver				1				1
hunting/warfare	cartridge case	.22 rimfire							1	1
hunting/warfare	cartridge case	.22 short rimfire		1						1
hunting/warfare	cartridge case	.22 winchester long rifle	1							1
hunting/warfare	cartridge case	.30 USA-UMC		1						1
hunting/warfare	cartridge case	.30 USC Co	1							1
hunting/warfare	cartridge case	.30-.30 rimmed		1						1
hunting/warfare	cartridge case, modif.	.30 with arrow shaft					1			1
hunting/warfare	shell, shotgun	yellow metal 12-gauge UMC		1						1
hunting/warfare	shell, unfired	.22 short				1				1
hunting/warfare	shell, unfired	.30-.30 UMC S		1						1
leisure time	games	composition poker chip, white							1	1
leisure time	miscellaneous	ferrous pocket knife fragments		1					2	3
leisure time	music	photograph record fragments	1	15						16
leisure time	smoking	cigarette butt/filter tip frags.	8			15	2	1		26
leisure time	smoking	cellophane cover, pull strip	1			3				4
leisure time	snuff	snuff can, ferrous, two piece	1							1
military	button	gilt 2-pc eagle & shield		1						1
military	button	white metal 2-pc eagle & shield		1						1
military	helmet part	yellow metal socket ventilator							1	1
military	helmet part	yellow metal spike							1	1

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military	trouser buckle	yellow metal 2- pronged HB & Co.		1						1
miscellaneous tools	axe	ferrous single bit, head only		1						1
miscellaneous tools	file	ferrous triangular			1					1
miscellaneous tools	pick	ferrous double end				1				1
miscellaneous tools	saw	ferrous rip saw, blade only		1						1
miscellaneous tools	saw	ferrous	1							1
miscellaneous tools	wrench	ferrous double open end		1						1
office supplies	chalk	assorted colors		1					1	2
office supplies	crayon	assorted colors	3	1		2		10		16
office supplies	ink bottle	colorless glass, Higgins		1						1
office supplies	pencil	wood, leaded, yellow metal band		1						1
office supplies	pencil eraser	green rubber	1							1
office supplies	pencil lead	5/8 inch fragment		1						1
office supplies	slate	slate, bevelled edge		1						1
office supplies	slate pencil	slate, flat, tapered	1							1
printing	slug (spacer)	white metal rectangular		1					1	2
printing	slug (type)	white metal rectangular lettered		3				1		4
storage-bulk	barrel	ferrous barrel loop		4						4
storage-bulk	box	brown cardboard	17					2		19
storage-bulk	packing	styrafoam	8			4	1	1		14
surveying	flagging tape	plastic, blue				1				1
transportation	tire tread	rubber, black flexible				1				1
transportation	windows, vehicle	celluloid, stitched					17			17
										0
TOTAL		TOTAL	51	42	2	33	21	16	8	173

Table 5.26: Summary of activity-related artifacts

ACTIVITIES CLASS	FILL	GOLD	MIXED	POST	STS	STS	U25-D	TOTAL
		RUSH		1900	1983	1985	DIST.	
Children	7	1	1	4		1		14
Holiday				1				1
Hunting/warfare	2	5			1		1	9
Leisure time	11	16	0	19	2	1	3	52
Military		3					2	5
Misc. tools	1	3	1	1			1	7
Office supplies	5	6		2		10		23
Printing		4				1	1	6
Storage, bulk	25	4		4	1	3		37
Surveying				1				1
Transportation				1	17			18
								0
TOTAL	51	42	2	33	21	16	8	173

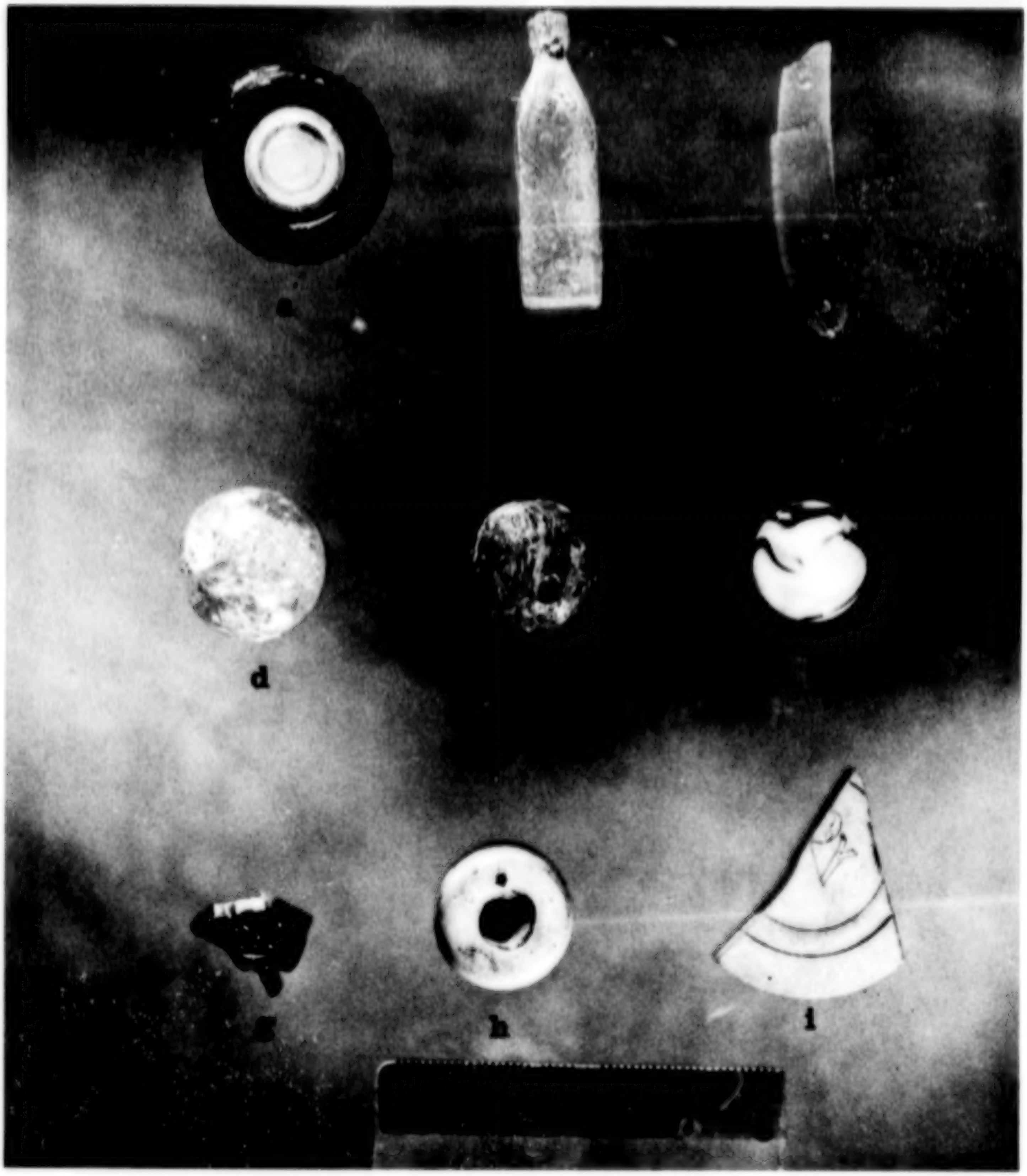

Figure 5.98: Assorted artifacts, toys and games

a. black plastic tire from toy
b. yellow plastic bottle charm
c. orange plastic knife
d. clear swirl-trimmed marble
e. clear swirl-trimmed marble
f. white marble trimmed with colored swirls
g. silver colored plastic charm
h. white rubber tire from toy
i. part of a floral trimmed poker chip

Unit 25-D, Disturbed Strata: Half a glass marble was found in unit 25-D, stratum D. The interior of this 3/4-inch diameter clear glass marble contains tiny flecks of a silvery material.

HOLIDAY CLASS

Only one item was put into this category, a piece of silver tinsel found in the post-1900 strata.

HUNTING AND WARFARE CLASS

Gold Rush: A number of cartridges and shells were found in the Peniel Mission excavations. Some of these may have come from the military, and others from citizens procuring an occasional bear or other game. It is likely that there were also a significant number of guns owned by merchants, would-be miners, saloon owners, etc. Bernard Moore used a Winchester rifle, and his father, Captain Moore, an ivory handled "great long Smith and Wesson revolver [six shooter]" (Moore 1968; 18, 123).

A .30-.30 shell, and a .30-.30 cartridge, both head stamped "U.M.C. 30-30 S.," were found in the lower part of units 25-A and test trench 21-A respectively (Figure 5.99j and e). The unfired copper shell and the yellow metal cartridge cases contained smokeless powder; the soft point is designed to spread out upon impact. These rimmed, shouldered, cartridges are external centerfire. Both items are necked, but one of the cartridges is broken off directly below where the case begins to taper. The shell is .415 inch in diameter just below the rim and 2.5 inches long; the casing is 2 inches in length. The cartridge measures 1.45 inches from rim to shoulder; the case diameter is .418 inches.

The initials on the headstamp stand for the Union Metallic Cartridge Company of Bridgeport, Connecticut which was in business under this name from 1867 to 1902 (or 1910) when it merged with Remington[1] (Logan 1948:8,10). The .30-.30 cartridge was not manufactured until 1895, however, so this item dates between 1895 and either 1902 or 1910. (Barnes 1980:48). The .30-.30 was adapted for use in the Winchester model 1894, Marlin Model 1893, Remington-Lee, Savage Repeating, and Remington No. 5 Rifles. It was the first small bore smokeless power cartridge marketed, and for its size, was one of the most powerful cartridges available at the time. This is a short range cartridge, accurate up to 75 yards, used primarily for deer and small game.

Other cartridges from Gold Rush strata include a brass 12 gauge shotgun shell found in Operation 21 test trench (Figure 5.99h). The headstamp reads " . . . C Co BRIDGEPORT CONN / 12 . . . A . . ." This cartridge was most likely manufactured by the Union Metallic Cartridge Company prior to 1902 (?)(Logan 1948:8, 10; Carley 1981:180).

A yellow metal, rimmed .22 calibre cartridge case, short, rim-fire, was found in test trench 21-C (Figure 5.99a). Rimfire .22's were first developed in 1857, and were later replaced by centerfire varieties (Logan 1948:63).[2]

While it is possible that the cartridges were fired somewhere in the vicinity of the dump, it is equally probable that they represent items tossed into the garbage indiscriminately, eventually finding their way to the stream bed.

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[1] Logan says that the "Remington Arms Company merged with the Union Metallic Cartridge Company to become familiarly known as Remington-UMC" in 1902 (Logan 1948:10). On the other hand, Fontana and Greenleaf (1962:801) suggest that "the Union Metallic Cartridge Company, Bridgeport, Connecticut . . . merged with the Remington Arms Company in 1910 as Remington-UMC.

[2] For an excellent discussion of rimfire cartridges, see Berge (1980:225).

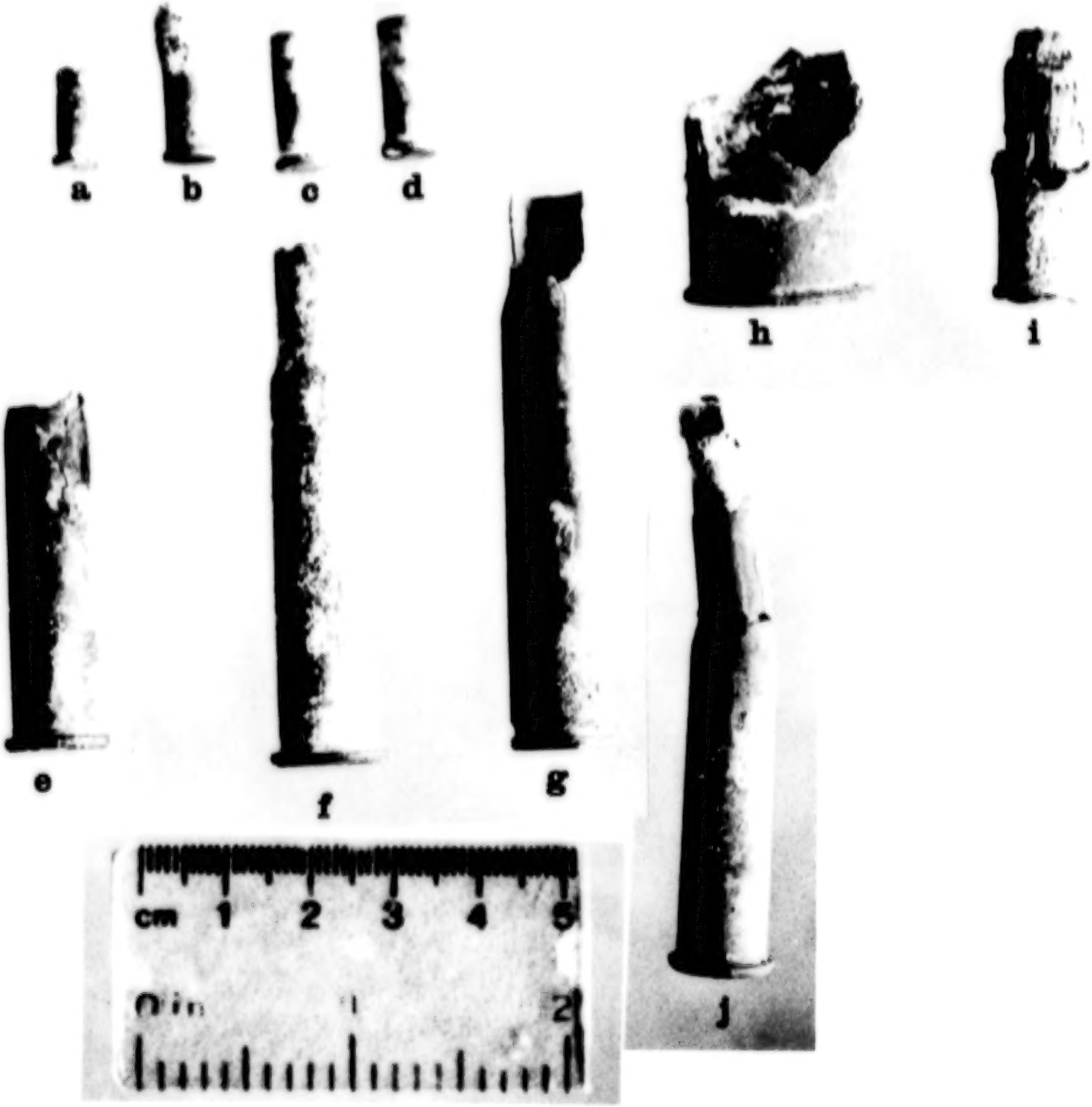

Figure 5.99: Assorted ammunition from the Peniel Mission excavations

- a. Yellow metal rimmed .22 cartridge case, short, rimfire
- b. Unfired soft point smokeless .22 short rimfire copper shell
- c. Cuprous .22 rimfire cartridge
- d. Cuprous .22 long rifle "H" cartridge, Winchester rimfire
- e. Yellow metal U.M.C.30-.30S cartridge case
- f. Cuprous .45 calibre cartridge, U.S. Army, external centerfire
- g. Yellow metal U.S.C. Co. (United States Cartridge Company) .30 calibre cartridge
- h. Brass 12-gauge shotgun shell, Union Metallic Cartridge Company
- i. Modified yellow metal .30 cartridge case and wooden shaft
- j. Unfired cuprous U.M.C. .30-.30 S shell, smokeless short range

Post-1900: Three pieces of ammunition were found in the post-1900 levels. An unfired soft point, smokeless .22 caliber (short) shell was found in stratum B of excavation unit 25-B (Figure 5.99b). This rimfire shell has a copper case, and a conical lead bullet. No headstamp is visible. According to the one expert, this is the

> best known of all American cartridges. It is the oldest in point of service of cartridges of American origin. Originally developed by Daniel Wesson for the Smith & Wesson First Model revolver, which came out late in 1857, its outside appearance has undergone but little change in all the years since. . . . Case may be either copper, brass or nickeled. More of these cartridges have been produced than any other single known cartridge (Logan 1948:63).

Excavation Unit 25D.D: A .22 caliber rimfire cartridge was found in stratum D of excavation unit 25D (Figure 5.99c). This unmarked cuprous cartridge is about .615 inch long. A nick on one edge of the rim probably marks the spot where the firing pin hit.

Shovel Tests: A yellow metal .30 calibre cartridge case containing a partial wooden shaft was found in shovel test TA20-L. This item may have been used for bird hunting. The cartridge, illustrated in Figure 5.99i, has been modified. The head of the cartridge is missing, and the front edge appears to have been rolled back. The case segment fits perfectly over a 3/8 inch diameter rounded segment of wood which was fitted inside the cartridge. According to one source (Musitelli 1983), bow hunters sometimes sawed off a segment from an expended cartridge, and used it on the arrow shaft instead of a point. This is so the meat would not be damaged by the arrow, but the bird would be killed when hit by the projectile.

It should be noted that many of the guns purchased for use in the Skagway area were probably never used for hunting, but were intended instead for self defense. For example, a series of robberies in Skagway prompted an "unusually good" demand for firearms (Daily Alaskan, 20 April 1900:2).

LEISURE TIME CLASS

Gold Rush: Black composition phonograph record fragments were found in several levels of unit 25-B. Fragments ranged from .090 to .112 inches thick. Several of these fragments appear to have been burned or heated.

The flat disc phonograph or gramophone was invented in 1887 by Emile Berliner. By 1895 Berliner was able to mass-produce phonograph records made of a shellac/celluloid-type product. These easily broken discs quickly became the medium for recording the great musicians of the period (Funk & Wagnalls 1979, v. 19:62,181).

A badly rusted, partial, ferrous frame from a pocket knife, including the end rivet, was found in stratum E of unit 25-D. The rest of the knife was found in the same unit in adjacent disturbed strata.

Unit 25-D, Stratum D: A fragment of an geometric/floral decorated composition "ivory" poker chip was found in this stratum (Figure 5.98i). The Sears Roebuck catalog for 1902 and the 1895 Montgomery Ward catalog list a wide variety of very similar items. Popular designs included the lily, fleur de lis, doghead, and American eagle designs (Sears 1969:916; Wards 1969:121).

Part of a rusted ferrous pocket knife was found in this disturbed context. This artifact was broken into two pieces, the base of the blade with its rounded articular surface, and the knife case, including one side with rivets. The rest of the knife was found in stratum E of unit 25-D.

MILITARY CLASS

Gold Rush: Several items of military issue were found in the Gold Rush period deposits. Two metal military buttons were found in test trench 21A and 21-C (Figure 5.100 illustrates one of these buttons). These are two-piece buttons with a loop shank. One is a white metal, 7/8-inch diameter; the other is a yellow metal, 13/16-inch across. The first button probably once had a gilt coating which has worn away. In all other respects, the two items are identical. A spread eagle design with a lined shield is stamped on the convex face. The eagle is facing right; in its right talon it is holding an olive branch, and in the left a bundle of three arrows. The front piece extends over the rim, and laps over the top of the back, creating a rounded edge.

On the flat back of the yellow metal button is stamped "Waterbury Button Co." Albert (1977:464) lists the date for this company logo as after 1849. The white metal button is missing the shank and part of the back. A partial maker's mark on its back reads "HORSTMANN", a company who manufactured numerous buttons for the military (Herskovitz 1978:40). Without the rest of the mark it is impossible to determine exact dates because the Horstmann Company went through various name changes from 1852 to 1935 (Albert 1977:464). The buttons found in the Peniel excavations are virtually identical to type GI 98 illustrated in Albert (1977:40) except the eagle's haunches on the pictured example are more rounded than are those of the specimens recovered. Many variants on this design were made, but Albert indicates style GI.98, which includes both the Waterbury and Horstmann buttons, dates between 1875 and 1902 (ibid).

Buttons of this type were used by the U.S. Army for general service enlisted personnel. Officers' and G.A.R. brass buttons were sold in both the Sears and Wards catalogs for the period. The edict decreeing their use (General Order No. 1A, Adjutant General's Office) was issued on January 20, 1854 and states "The same button (a spread eagle with shield) will be used for all corps, to wit: that now used for the Infantry, omitting the I on the shield" (Albert 1977:40-41).

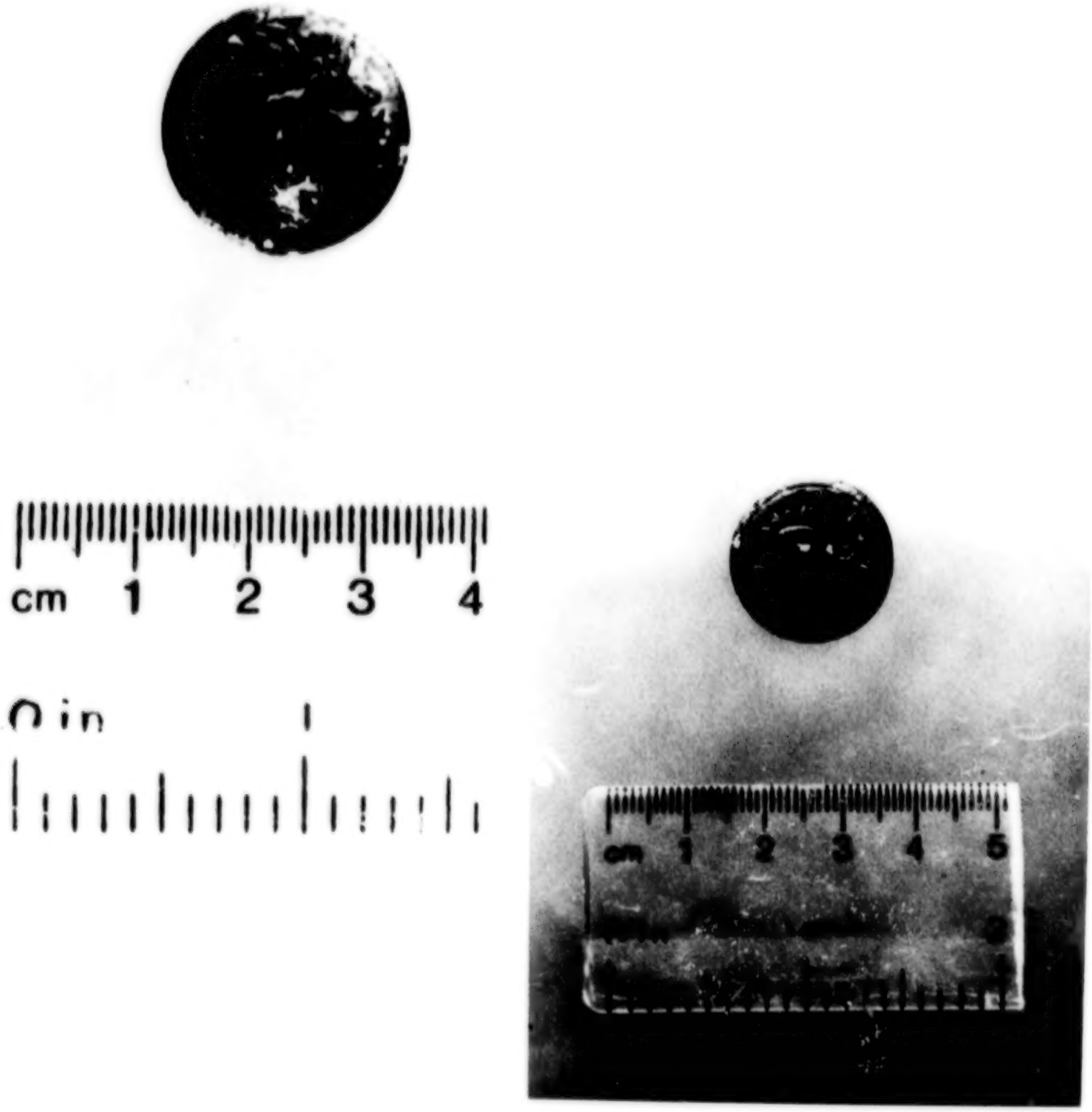

Figure 5.100: Gilt uniform button

Quartermaster's specifications called for two sizes of buttons: large (32-½ lignes), and small (25 lignes) (U.S. War Department 1986:84-85).[3] Both of the recovered examples are "large" coat buttons. In 1902 these standard issue buttons were replaced by the "Great Seal" button which substituted a replica of the great seal in the place of the spread eagle design (Albert 1977:42).

One fragmentary white metal 2-hole sew-through button, also recovered from the pre-1900 levels of test trench 21 may be of Government issue, but bears no diagnostic markings, so has been included in the Personal Class.

A small double-pronged white metal buckle was recovered from the pre-1900 levels of excavation unit 25-D. This military issue buckle is 1-1/8 inches long by 1-½ inches wide (Figures 5.101a and b). It is identical to buckles shown in the Quartermaster General's catalog of U.S. Army Uniforms and Equipment, 1889. In this catalog, the buckle is shown on white linen trousers (U.S. War Department 1986:108-109, 362).

According to Herskovitz (1978:36-37), the stamped backmark, which reads "H.B.& Co.," probably stands for Horstmann Brothers and Company who operated under that name in New York from 1859 to 1862 and in Philadelphia from 1859 to 1863, and 1867 to 1893. Military trouser buckles were first mentioned in an 1875 Army board report "which recommended that a 'strap and buckle on the back' be adopted as one of several modifications to issue trousers" (Herskovitz 1978:37).

One of the cartridge cases found in the Peniel Mission excavations may have been used by the military. This yellow metal .30 caliber

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[3] The "line" or "ligne", a French term, "is the unit of measurement used in the button trade to describe buttons in terms of their diameter. There are 40 lignes to the inch, so that the ligne scale may be converted to inches by multiplying the number of lignes by .025" (Herskovitz 1978:37).

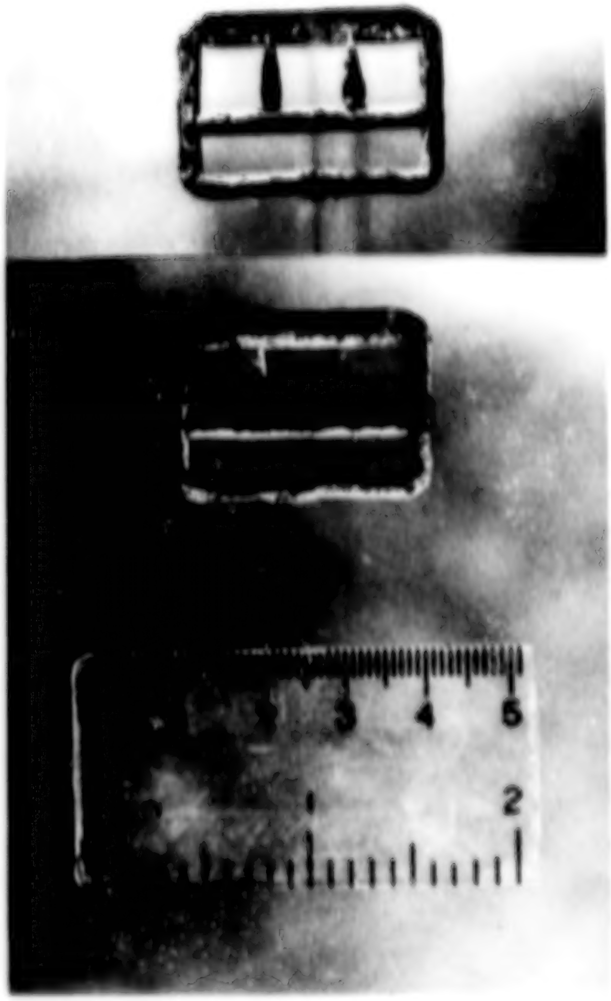

Figure 5.101: Two views of a white metal, military issue, trouser buckle

cartridge, found in the lower levels of unit 25-B, is headstamped "U.M.C. .30 U.S.A." indicating it was made by Union Metallic Cartridge Corporation (Figure 5.99f). The Montgomery Ward's catalog for 1895 (1969:471) shows an identical item with the notation ".30 U.S. Army". This cartridge case has a rimmed head and is necked, meaning its cylindrical shape is narrowed at the front end. It is an external centerfire cartridge, measuring 2-5/16 inches long and has a diameter of .459 inches. According to Berge (1980:226), "external centerfire cartridges are those shells that make use of a primer located outside the head plate". This shell could have been fired from a .30-.40 Craig rifle (Greene 1986).

It is possible that the ferrous "Ohio pattern" axe head recovered in the lower levels of the test trench 21-B was also of government issue. It is the same shape and size (7-½ inches long, 3-¼ inches wide at the butt, and 4-½ inches wide at the blade edge) as the axe pictured in the Quartermaster General's Specifications (Figure 5.102) (U.S. War Department 1986:246-247).

The wooden axe handle has been cut off flat against the body of the axe head. One possible explanation is that the single bitted axe head was altered and reused as a wedge for splitting wood or felling trees.

Unit 25D.D: Parts of an infantry helmet came from several areas of the site, including the mixed deposits of unit 25-D. The basic wool felt helmet was designed to be used by either the infantry or the cavalry (Figure 5.103). The ornaments used on the helmet distinguished the mounted and foot soldiers; that is, cavalry helmets had a tall plume and plume holder, while the infantry used a tall spike (Figure 5.104). According to the War Department specifications, the spike was

> . . . to be of polished high brass, according to pattern, hexagonal, fluted surface, with screw of brass to fit socket in top of helmet. Height of spike three (3) inches; widest diameter one (1) inch . . . base of No. 24 sheet-brass (high); oak-leaf design according to pattern, eight (8) points, bed in

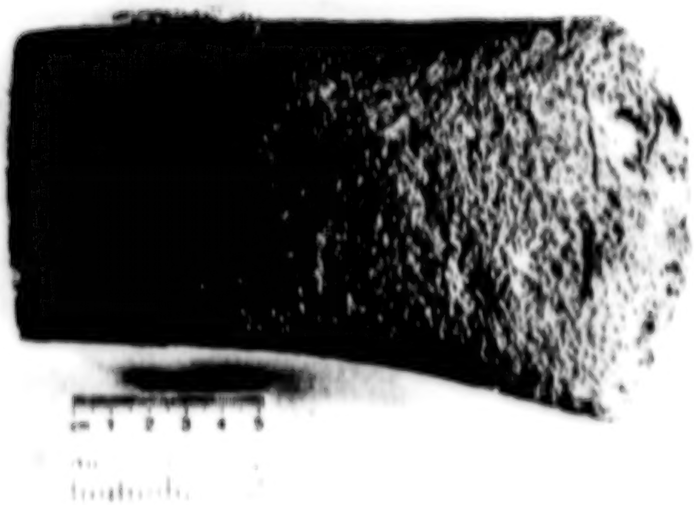

Figure 5.102: Ohio pattern single-bitted axe head

WAR DEPARTMENT,

QUARTERMASTER GENERAL'S OFFICE.

Specifications for Helmets, untrimmed, for all Troops.

Material.—To be made of felt composed of two-fifths (⅖) yellow carroted double ring I H Russia, two-fifths (⅖) yellow carroted best coney backs, and one-fifth (⅕) best colored muskrat.

Small sizes to be formed on cone 25 by 27 inches, and each body to weigh three and one-eighth (3⅛) ounces.

Large sizes to be formed on cone 26 by 28 inches, and each body to weigh three and three-eighths (3⅜) ounces.

Helmets to be wine stiffened and to have a "long" black color. Suitable holes must be made in the sides of the helmet for fastening on the side buttons.

Shape, etc.—To be in shape according to the standard sample. Black enameled leather band, seven-eighths (⅞) of an inch wide, to surround the helmet at the base of the crown, and to have an adjustable chin-strap, each part ten and one half (10½) inches long, of the same material, with brass sliding buckle, as on sample. The lower edge of helmet to be bound with black enameled leather, and the inside of visor all around to be lined with green morocco leather, pasted to the body with rubber cement. The sweat-leather to be of Belgian sheep-skin two (2) inches wide; inside the sweat-leather a band one (1) inch wide, of heavy enameled leather. All to be well stitched to place.

Sizes.—To be of six (6) standard sizes, numbered from one (1) to six (6), inclusive, corresponding to the trade sizes, 6¾ to 7⅜, inclusive.

The standard sample to be followed in all respects as to shape, quality of materials, workmanship, etc.

Adopted February 12, 1889, in lieu of specifications approved January 13, 1888, which are hereby canceled.

S. B. HOLABIRD,

Quartermaster General, U. S. A.

956—F., 188

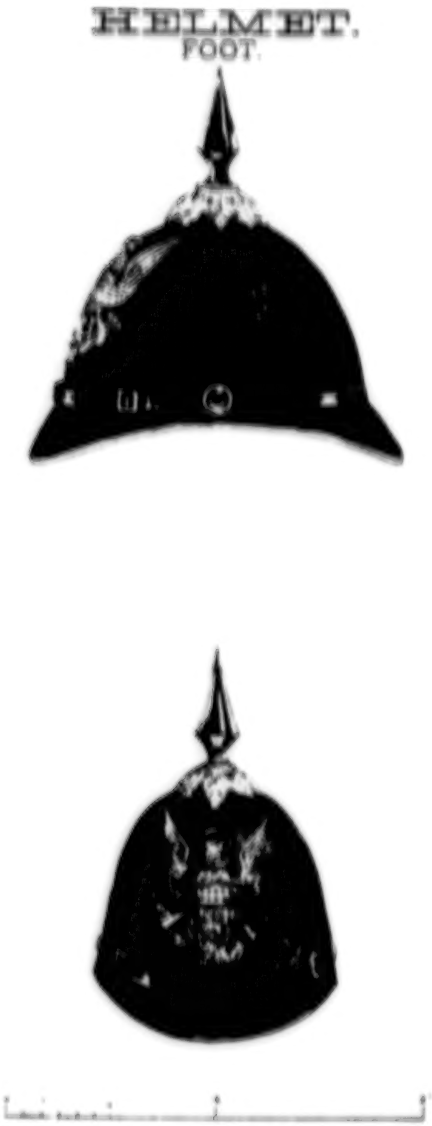

Figure 5.103: Illustration of wool felt helmet, military issue

Source: U.S. War Department (1986:292-293)

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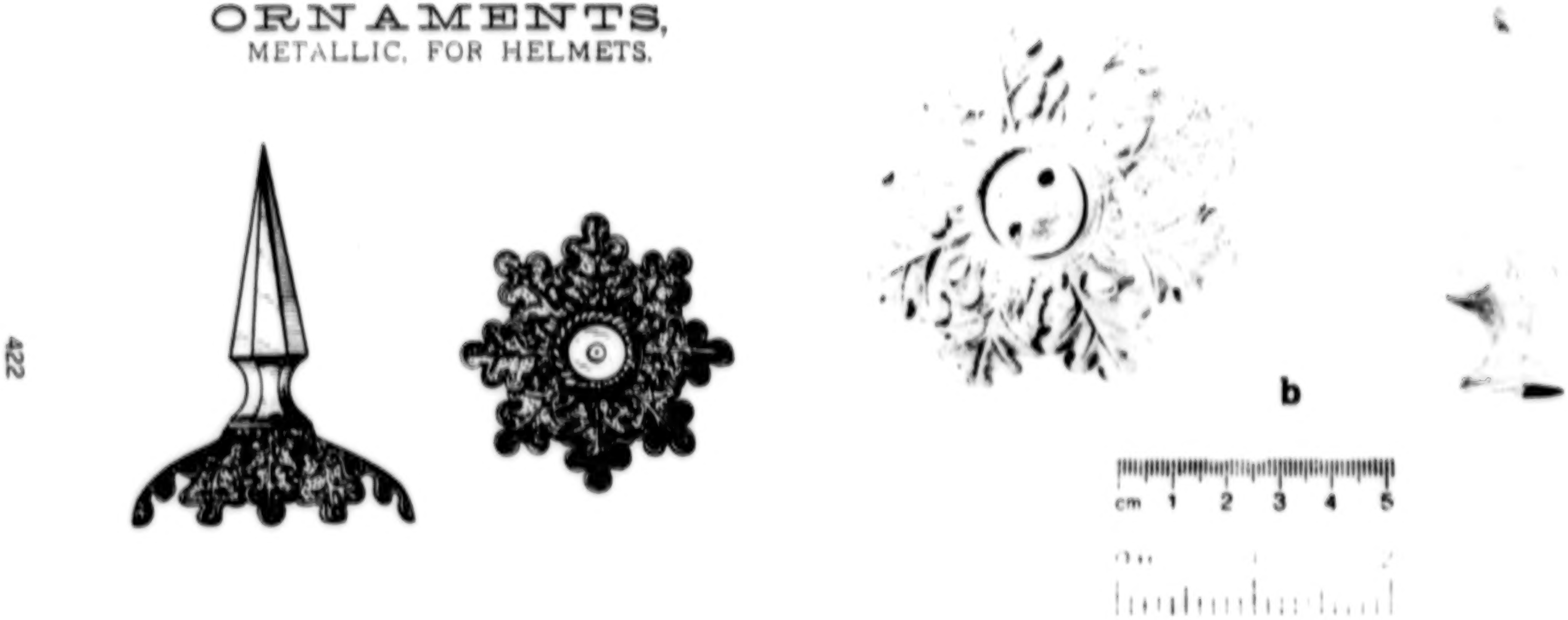

Figure 5.104: Ornament for infantry helmet a) illustration showing military issue ornament b) spike socket and base from Peniel Mission (U.S. War Department 1986:351)

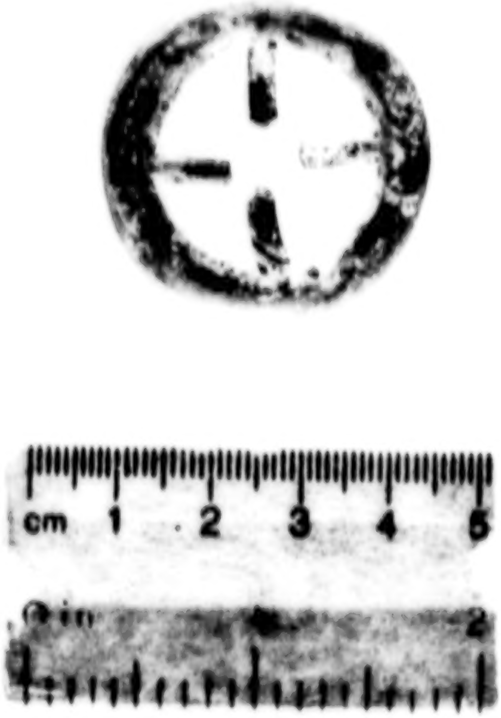

Figure 5.105: Helmet socket ventilator

center to receive base of spike and hole cut for spike-screw (U.S. War Department 1986:345)

The parts found at the Peniel Mission, the spike and the oak-leaf base, came from the 1881 pattern helmet (Greene 1986, Herskovitz 1978:42-44) (Figure 5.104b).

The yellow metal ventilator socket which holds the spike to the helmet was also found in this stratum (Figure 5.105). This ventilator socket is a 1-7/16 inch diameter circular convex-concave band with four spokes extending towards the circular center which was originally threaded to receive the bolt from the spike that was affixed on top of the helmet.

It appears that these helmet ornaments may have been purchased soon after the Army moved into the Astoria Hotel. Because of the Dyea fire, Captain Hovey had to requisition a number of miscellaneous supplies, especially clothing and equipage needed for his troops. On Hovey's list were such items as woolen blankets, made and unmade blouses, canvas fatigue clothing (coats and trousers), caps (canvas, forage, and fur), metallic cap ornaments, cloth chevrons, knit wool drawers, fur and leather gauntlets, white berlin gloves, and drab (fur) campaign hats. These items were ordered November 7, 1899. The 44 cap ornaments were not available from the San Francisco depot, so they were supplied from Philadelphia (Quartermaster General, 1899b).

A very badly corroded metal container was found in stratum D. It was filled with refuse and a heavy, dense white chalky material. While not identical to the camp kettles illustrated in the Quartermaster General's specifications, this heavy iron container is similar in design and size, measuring 10 inches external diameter by 9-1/2 inches deep. The heavy rounded rim is rolled inward, and the base appears to be a separate band--rolled under on the bottom and flattened at the top where it joins the container sides. The recovered artifact lacks the wire bale/handle shown on the Army kettle. It is possible that the handle holders pulled away during use, and the item was relegated to use as a container for lime, plaster, etc.

MISCELLANEOUS TOOLS CLASS

Only a few tools were found in these excavations. In the Gold Rush deposits of excavation unit 25-B was a ferrous double open end wrench whose slotted ends will accommodate fittings of 3/4 and 5/8 inch respectively (Figure 5.106). It is obvious, however, that tools were crucial to construction in this rapidly developing community. For example, when the Moores first began work on their wharf and cabin, they used a hand pile driver, crowbar, blocks, timber dogs, broadaxes, iron froe for splitting shakes,

> axes, crosscut saw, sledges, steel wedges, several bars of three-quarter-inch round iron, half coil of one-inch manilla rope, pair of double purchase blocks, large spikes, nails, and other necessary tools (Moore 1968:20-21, 98).

Later, they used a steam driver for their wharf construction. It was also necessary for the Moores to bring in such things as blacksmithing tools.

A fragment of a slender triangular file, badly corroded, was found in the post-1900 deposits of test trench 21-D. A double-pointed ferrous pick, lacking the wood handle, was found in excavation unit 25-A in association with construction materials and food storage items. This is the type of pick normally used for hard-rock mining (Nuce 1987).

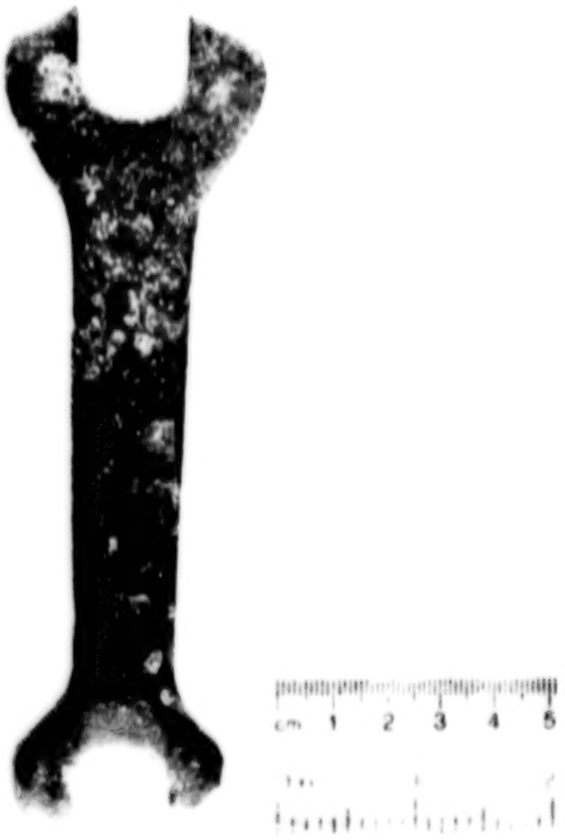

Figure 5.106: Double end wrench.

PRINTING CLASS

Several pieces of white metal type and spacers were found in the Peniel excavations (Figure 5.107). These items are known in the trade as lead slugs, made for a linotype machine. The slugs are slotted along the bottom edge, and have a raised letter or mark on the end. The slugs are put into a metal galley and inked to run a proof. The different lengths are for different size print: e.g., 12 point as opposed to 24 point. The blank slug provided space from the "leading edge" (Robb 1986).

While the source of these items is unknown, it is assumed that they may have come from a local newspaper office. The Skagway-Atlin Budget Newspaper office was situated on 5th Avenue between Broadway and State Streets, only a short distance from the Peniel Mission area. By the turn of the century, there were three newspapers in Skagway: The Daily Alaskan (morning), the Skagway Budget (afternoon), and the Skagway News (weekly) (Daily Alaskan, 1 January 1900:8).

The type may have come from other sources also. Metal type or presses, "put up in wood cases with division for each letter . . . [and] Quads, spaces, and figures . . . [for] every font" were readily available from Montgomery Ward (1969:223).

Gold Rush

Three of the lead slugs were found in the Gold Rush deposits. Two of the lead type slugs are 0.925 inch long; the third is 0.75 inch in length. All three are 0.110 inch wide by 0.063 inch thick. The raised lower-case letters "d" and "f", respectively, appear on one end of the longer type bars. A raised apostrophe is on the end of the shorter item. The spacer measures 0.75 by 2.25 by 0.085 inch in size.

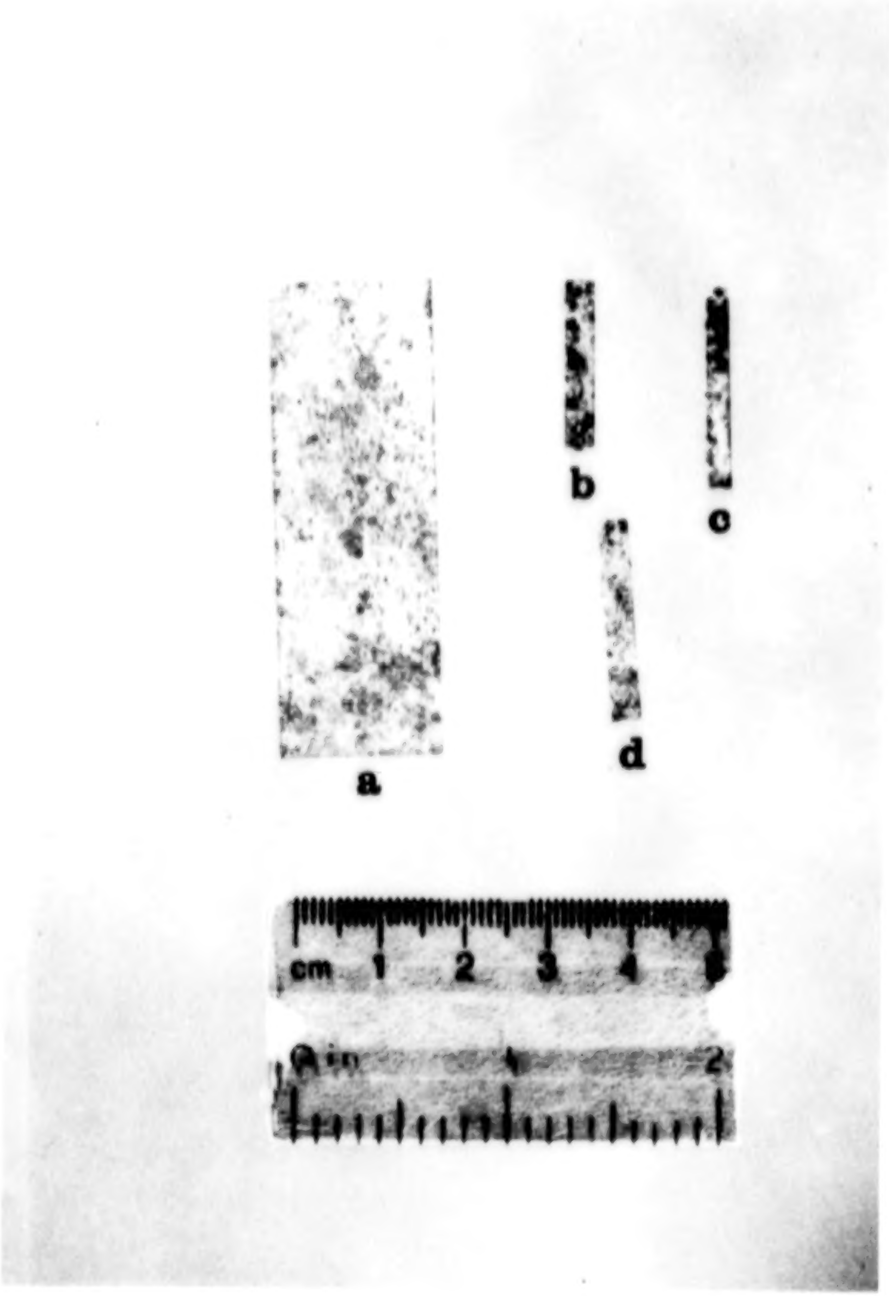

Figure 5.107: White-metal slugs, spacers and type.

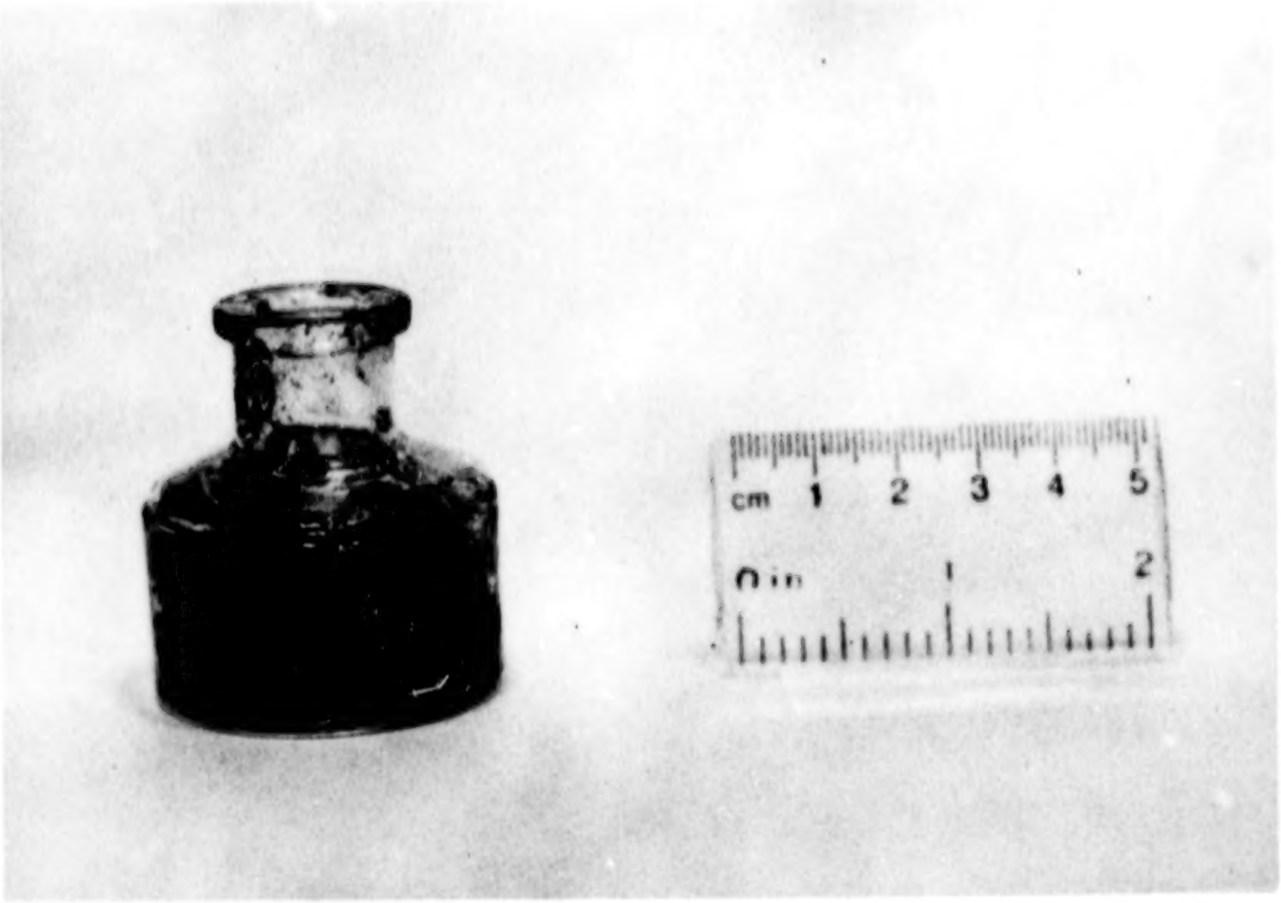

Figure 5.108: Higgins Ink bottle from Test Trench 21-A.

Unit 25-D. Disturbed

Another blank lead slug (spacer) was found in this disturbed stratum. It measures 0.085 by 0.825 by 0.75 inch in size.

1985 Shovel Tests

A lead slug with the raised lower-case letter "y" was found in level 5 of the 1985 shovel tests. The slug measures 0.110 inch wide by 0.063 inch thick by 0.925 inch long.

OFFICE SUPPLIES CLASS

Gold Rush: A round, clear glass Higgins ink bottle retaining traces of black ink on the interior was found in test trench 21-A (Figure 5.108). This bottle was made in a two piece cup-bottom mold; it has a tooled lip. Embossing on the base reads "HIGGINS INKS BROOKLYN, N.Y." The Higgins Ink Company, which dates to about 1880, was acquired by Faber Castell of Parsipany, New Jersey in the 1960s (Charwath 1987).

SURVEYING CLASS

A small piece of blue plastic flagging tape was found in the post-1900 levels of test trench 21-D.

TRANSPORTATION CLASS

A fragment of black flexible tire tread found in the post-1900 strata may have been from any one of a number of types of small tires, such as a lawn mower, baby carriage, wheelbarrow, etc.

Fragments of stitched celluloid found in levels 1 and 2 of the 1983 shovel test 20-D appear to have been portions of a vehicle window, such as that used for the rear window in a Model-A Ford.

AMBIGUOUS GROUP

Gold Rush: The artifacts included in the Ambiguous Group are listed in the inventory, Table 5.27. Most of the items in this group are discussed below; the rest, such as paper, rubber tubing, etc., require little explanation, and are simply itemized in the extensive inventory.

Fragments of anamolous yellow glass were found in several areas of the Peniel Mission excavations. These sherds have been included in the Ambiguous Group because they may have come from decorative furnishings, personal items such as perfume or cosmetic bottles, or even beverage or food storage containers.

Pieces of decorative white and yellow metal from several units are also included in the Ambiguous Group because they could not be assigned to any one group with certainty. As an example, the white metal laurel leaf garland (Figure 5.109g) and the yellow metal trim (Figure 5.109h) may have come from one of several different items. Period catalogs show similar trim on a "photo box with medallion" (Sears Roebuck 1969:263); "sash buckles" (ibid. 96); "black seal purse with fancy metal corners" (ibid:932), etc.

Items a through f in Figure 5.109 appear to be parts of ornamental latches and hinges of a size appropriate for some sort of small container or book, but as before, period catalogs picture a variety of items with similar parts.

Glass stoppers were used in various bottles--from caster oil to perfumes, show bottles to barber's tonics. A stopper of undetermined original function was found in the trash deposits of the Operation 21 test trench B. This round headed stopper is of colorless glass; the base and stem have been melted and slag partially obscures the side (Figure 5.110b).

Table 5.27: Ambiguous Group artifacts inventory

AMBIGUOUS GROUP		FILL	GOLD	MIXED	POST	STS	STS	U-25D	F202 &	TOTAL
Type	Description		RUSH		1900	1983	1985	DIST.	F204	
battery fgs.	zinc/carbon & cardboard				5					5
decorative object	ferrous		2							2
decorative object	white metal	1								1
earthenware tile	red, coarse, unglazed, sq							2		2
filagree	yellow mtl decorative		5							5
isinglass	stove, lamps, etc.	5								5
paper			1							1
pipe	ferrous, fragment				1					1
rod	ferrous, fine		1							1
slate	grey, fragmentary		3					14		17
vessel rim fg	ferrous						1			1
stopper	glass, aqua, mushroom sp							1		1
stopper	glass, clear, bulbous, brnd		1							1
										0
TOTAL		6	13	0	6	0	1	17	0	43

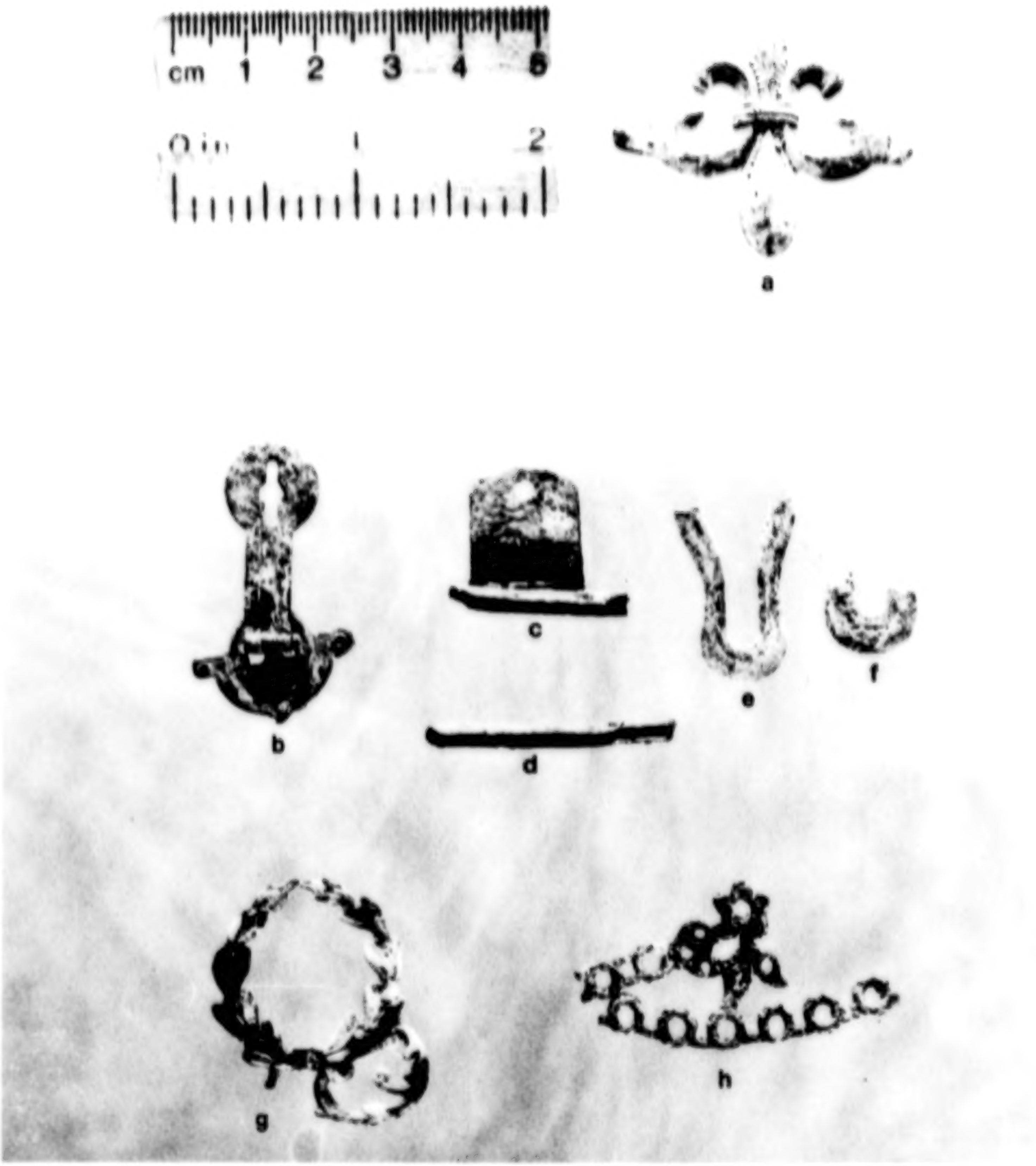

Figure 5.109: Assorted ambiguous decorative trim and hardware.

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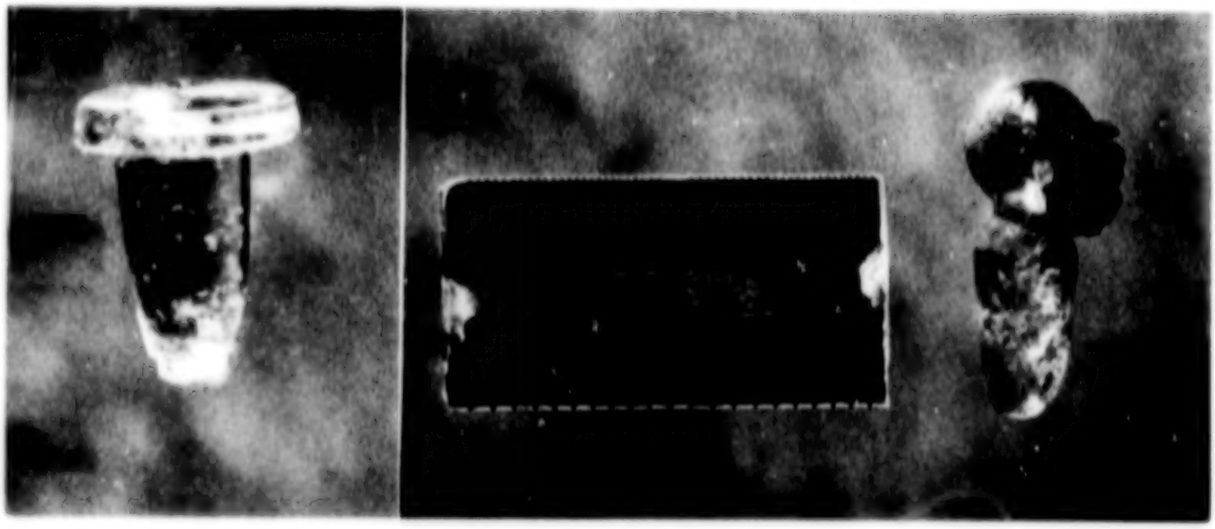

Figure 5.110: Glass stoppers.

Some of the slate found in the Peniel Mission excavations was assigned to the Activities Group, Office Supplies Class because the items were clearly from a small slate board. However, anomalous pieces of slate from the trash deposits in unit 25-D were placed in the Ambiguous Group since they may have come from other sources such as slate roofing, a pool table top, etc.

A broken ferrous plate was found in stratum E of unit 25-D (Figure 5.111). This ambiguous cast iron item, decorated with a stylized geometric pattern, has a screw hole in the base. It could be part of a hat and coat hook (Sears 1968:89), a decorative flower pot bracket (Sears 1968:88), part of a door pull (Sears 1968:92), or a door bell (Sears 1968:92). It might also have come from a wood stove, etc. A small shell-shaped decorative ferrous object found in the same area may also have come from some as yet unidentified household furnishing or utensil.

A ferrous "D" ring measuring 1 inch by 1-1/8 inch in size was found in unit 25-D. This item may have been used for several purposes; i.e., it may be from a harness, knapsack, swivel chain, etc. (Figure 5.112e). We do know that early day Skagway had large numbers of horses and oxen used for transport and packing. Military records document the acquisition of a variety of horse related paraphenalia. This item may have been related to one of these activities.

Post-1900

The yellow metal fleur-de-lis from stratum D of the Operation 21 test trench D was included with the Ambiguous Group because it may have been part of the hardware on a piece of furniture, or may have come from jewelry or clothing accessories (Figure 5.109a). Like several other articles in this photograph, it may also have come from a decorative box or album. A piece of a decorative, yellow metal latch or hinge part, identical to the one found in the Gold Rush deposits, was found in the post-1900 deposits of unit 25-A (Figure 5.109d and e).

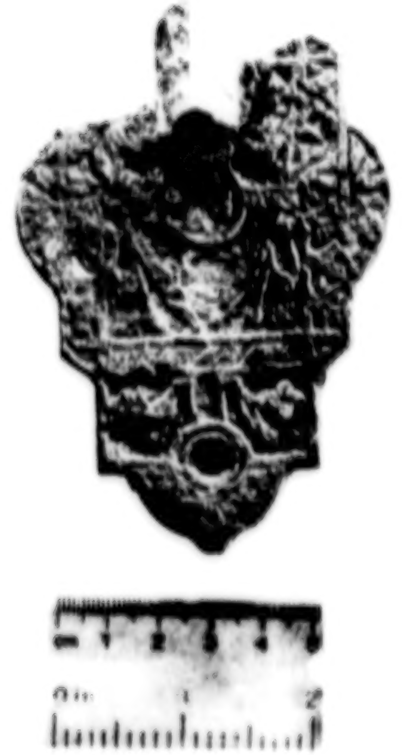

Figure 5.111: Decorative iron object.

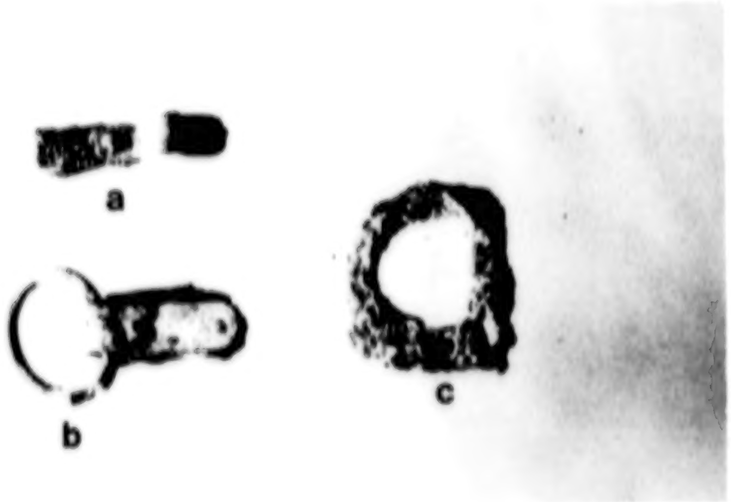

Figure 5.112: Miscellaneous ambiguous artifacts.

flashlight battery, etc. Or, these fragments may also have come from a telephone battery; telephones were present in Skagway by the turn of the century.

Unit 25-D Disturbed

A tapered cylinderical stopper of aqua glass with a mushroom-shaped top was found in this disturbed stratum (Figure 5.110a). The stem is not ground; the bottom is missing. This peg type stopper might have graced a number of containers, from cruets to pharmaceutical bottles (Berge 1980:48-49). For example, it might have been used on a tincture bottle, or possibly for shop furniture (barber's or perfumer's ware). Similar items are shown on extract bottles, perfume bottles, tincture bottles, syrup dispensing bottles, etc., in a turn of the century bottler's catalog (Putnam 1965:100).

Shovel Tests

Other small pieces of hardware whose original function is ambiguous include a yellow metal ring or pull which has a piece of leather fastened into the backing, and small latch piece, also of yellow metal, which was attached to a ferrous metal object (Figure 5.112d and b respectively). This may originally have been a metal box of some sort. Prompted by a series of fires and robberies in Skagway, individuals took special precautions to protect their valuables. One party

> whose accounts did not run high enough for a fire proof safe, purchased a good sized japanned cash box, and had two holes drilled through the bottom by which he could screw it securely to the floor (Daily Alaskan, 20 April 1900:2).

UNCLASSIFIED GROUP

As discussed in the introduction to Chapter V, the Unclassified Group encompasses several classes of items that are difficult or impossible to categorize beyond certain material and physical characteristics. Appendix A.6 provides an inventory of all the items included in the Unclassified Group. A summary is shown in Table 5.28. Within this group are the Changed Class, the Unknown Class, and what has been called, for lack of a better word, the Whatsit Class.

CHANGED CLASS

Many of the items in the Changed Class are assorted sherds of ceramic or glass that have been heated, melted, or in some cases, completely deformed. Charcoal and charred, unmilled wood are listed in this class, as are the many anamolous ferrous lumps found on this site. Generally, the majority of the flat ferrous materials were classified as tin cans, or in some cases, strapping iron. Because they represented at best a grab sample,[1] the numerous combustion products found in the excavations were not included in the inventory. No discussion is offered for the rest of the materials in the Changed Class, for the information known about them is included in the detailed inventory (Appendix A.6).

UNKNOWN CLASS

Generally the artifacts or materials included in this class are too fragmentary or too deteriorated to identify more than the material. Occasionally, in the case of several amorphous items found in the

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[1] In this instance, a grab sample is defined as an unmeasured quantity of artifactual materials collected to illustrate the general configuration and material type. No particular sampling strategy was used in their selection or retention.

Table 5.28: Summary of unclassified materials.

UNCLASSIFIED GROUP	FILL	GOLD RUSH	MIXED	POST 1900	STS 1983	STS 1985	U25-D DIST.	F202 & F204	TOTAL
Changed									
ceramic		3	6	5	1	1	1		17
charcoal and charred wood		42	2	13	25	3	10	2	97
ferrous lumps	89	374	33	209	58	88	137	3	991
glass	8	136	22	21	11	12	50		260
miscellaneous		2				8			10
msc combustion products		15							15
plastic				1					1
stone	11	2		2	1	13	13		42
white metal					1				1
Unknown									0
ferrous	4	8	2	5	2				21
glass	5	17		49	18	1	4		94
leather	2	3							5
miscellaneous		2							2
organic		27	1	215	5		2	3	253
plastic & nylon	18		1	15	1	4	1		40
rubber							1		1
unknown		12				6	1139		1157
white metal		13	1	1		3	1		19
yellow metal		9					3		12
Whatsit									0
carbon or graphite		1		1					2
celluloid				2					2
composition		10		10	4				24
ferrous	2	14	1	2		1	2		22
glass		2					1		3
non-ferrous metal		1		1					2
organic						3			3
unknown objects		1							1
white metal		6					1		7
yellow metal		5					9		14
TOTAL	139	705	69	552	127	143	1375	8	3118

deposits, even the material type remains a mystery. Where the material or item can be identified, it is included in the inventory by name (Appendix A-7).

Several items such as a ferrous disc and a heavy biplanar ferrous piece might have been identifiable if they were not so badly corroded. Unfortunately, only the general form of the original object could be deduced from the rusty pieces remaining, and these and similar items were included in the Unknown Class. In several cases, rust removal using electrolysis was successful, but many of the items could not be so treated, being mere particles of rust held together by faith. In other cases, quite a bit of the original object was present, albeit rust covered, but the items had evidently been burned, and the slag adhering to the exterior prevented rust removal.

Many of the plastic objects were so fragmentary as to be unidentifiable. Plastics are used for a wide variety of objects from tools to toys. The term "plastic" is generally reserved for a "large group of mostly synthetic compounds composed of organic molecules in certain predetermined complex combinations . . . ." (Funk and Wagnalls 1979:180-181). Plastics are synthesized from a variety of common materials such as wood or cotton pulp, organic acids from coal tar, and "produced by chemurgy . . . from corn, potatoes, peanuts, and soybeans." Production of these synthetic materials began around 1860 with the production of Celluloid (cellulose nitrate), invented by John Wesley Hyatt. Celluloid soon captured the market and it was not until 1895 that other plastic materials were used with shellac to produce phonograph records. About 1900, German industry produced a caesin (milk) or soybean product hardened with formaldehyde for use in buttons and other similar products. Around 1909 Emile Hemming introduced a type of cold-molded plastic consisting of an "asbestos filler, with a binder of asphalt, pitch, coal tar, drying oils, or resins" (ibid.). These products were used in heat-resisting handles, connector plugs, etc. Bakelite, a thermosetting synthetic resin, was introduced in 1909 by Leo Hendrik Baekeland. The process for making this "plastic" involved a reaction between phenol and formaldehyde.

Bakelite plastics were "popular for their beauty as much as for their durability" (ibid.). Various cellulose nitrate and acetate products were used in limited applications throughout the first three decades of the century. In 1929, urea-formaldehyde plastics were introduced for use in a number of light weight, high shock resistant, chemically inert products. About the same time, resins formed from vinyl chloride and vinyl acetate were introduced, and were used for transparent items such as laminated safety glass, phonograph records, etc. The transparent products known as Lucite and Plexiglas (methyl methacrylate) were marketed first in 1937. Polystyrene resins, characterized by high chemical and mechanical resistance and extremely low water absorption, were first produced commercially about 1937. Nylon plastics (of polyamide resins), especially useful for textile fibers and brushes, and many other "plastics" were introduced during this period, many in response to the diminished reserves of natural materials during World War II (Funk & Wagnalls 1979:181).

WHATSIT CLASS

The artifacts included in this class can be defined by morphology, material type, and manufacturing technology. Most of them appear to be parts of some larger items or piece of equipment. They might be readily recognizable to someone, somewhere. However, they remain unidentified for the time being, and are catalogued by themselves in this class.

Gold Rush: A number of small yellow metal objects were recovered from the trash deposits. For example, a very small, circular, caplike yellow-metal object was found in stratum E of unit 25-D (Figure 5.113f). It has two small flanges on opposite edges, and a small raised nipple centered on the top. The opposite face is slightly concave. This item measures 3/8 inch in diameter by ±2/32 inch thick.

Two other small yellow-metal fittings from the same area are included in this class also. These 1/2 inch diameter by 3/8 inch long cylindrical objects are of very thin metal. One end is bent gently inward, narrowing the diameter of the opening.

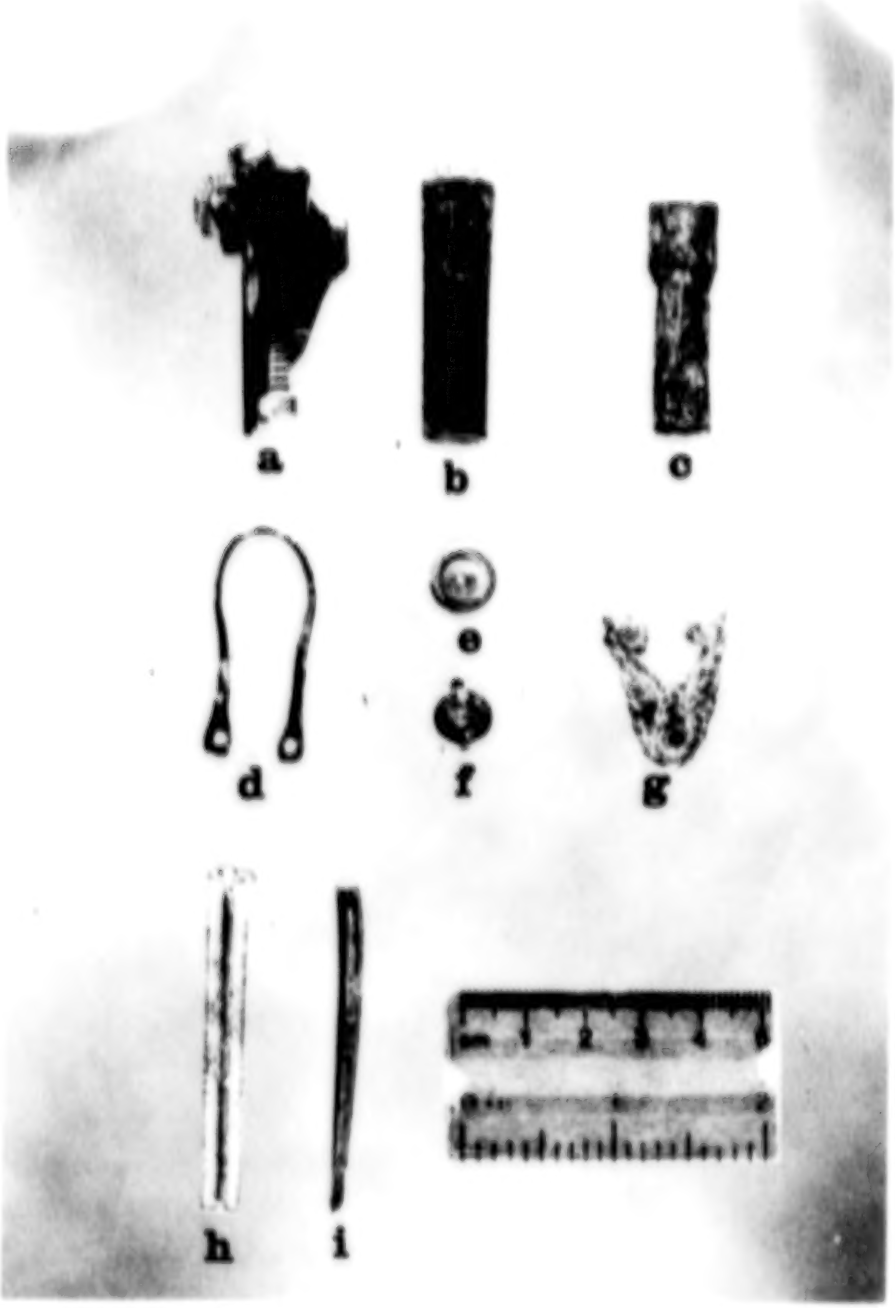

Figure 5.113: Whatsits.

A small (15/32 inch diameter) yellow metal item was found in unit 25-D. The extended 3/16-inch long shaft on the back is hollow. Another similar yellow metal piece from the same area is round, with a small depression in the face; on the reverse is a circular, hollow projection about 9/10 inch high.

Two yellow metal grommets found in unit 25-D appear to fit together. The larger of the two items, which is 1-11/16 inch in diameter and 1/4 inch wide, is rounded on the exterior, and dished on the interior. The second item is smaller, and slopes inward from the base; it is 1-7/16 inch in diameter and 1/4 inch wide. These items resemble very large grommets, or possibly the brass fittings around a door lock.

A wood and cast iron artifact was found in stratum E of excavation unit 25-D (Figure 5.114). The semicircular cast iron piece is fastened to the heavy piece of wood with 3 bolts. The cast iron portion is 5-3/4 inches long, 1-5/16 inch thick, and 3 inches high. The flattened side curves over the wood piece, which apparently has splintered away at the upper two bolts. Two grooves, one slightly deeper than the other, have been worn diagonally across the top of the metal piece. The size of the groove suggests it was worn by a large metal cable, circa 3/4 inch in diameter. The metal plate must have served to protect the wooden portion of the object. This item may have come from a dock, railroad yard, or other area where it provided protection to a wooden object from a moving cable or metal part.

Two small objects from the Gold Rush deposits in unit 25-B that could not be identified as to original function are shown in Figure 5.113h and i. The first is made of white metal, possibly a lead/zinc alloy. It is oval in cross section, and is bent at one end in a 90° angle to a rounded "L" shape. The inner surface is flat, and has a deep groove reaching almost to the other side. Both ends are broken away. The exterior has numerous small irregular striations perpendicular to the long axis.

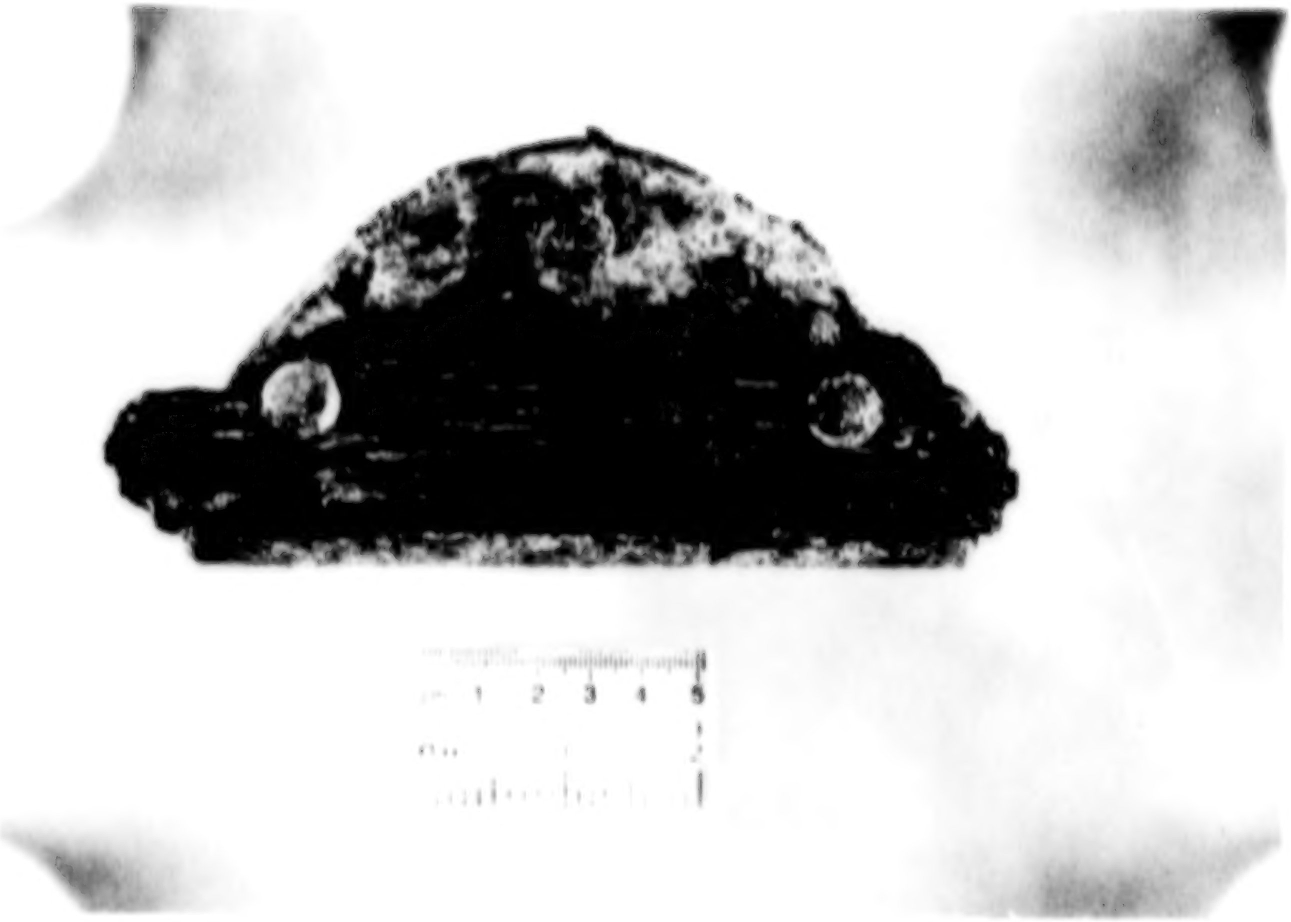

Figure 5.114: Unidentified wood and cast iron object.

The second, of a hard yellow metal clad reddish substance, is shaped like a very large (2-1/8 inch long) comb tooth. It tapers from 3/16 inch wide to a point, and is slightly curved from the top to the bottom. The wide end is broken away.

Two somewhat similar slim rods or pins were put in this class. The first is a slender ferrous pin or rod, pointed on one end. Although the exact size is hard to gauge, given the amount of corrosion, this artifact measures about 4-5/8 inch long and 0.085 inch in diameter. It may well have been part of a hat pin, or merely a piece of wire that appears to be pointed on one end.

The second is from the trash deposits, in unit 25-B. It is a long (approximately 9 inches), narrow (about 0.1 inch diameter), squared ferrous rod. It is bent in a gentle 90° curve about 6-1/2 inches from one end. The long straight end is flattened, and may have had some sort of attachment.

A small yellow metal object superficially resembling a clip was found in stratum E of unit 25-D (Figure 5.113g). It is unclear whether this item once had moving parts that are now fast due to corrosion. It has two small stops or teeth on the inner portion of the V-shaped opening.

Also found in unit 25-D was a small U-shaped white metal eyelet (Figure 5.113d). This item has been japanned or enameled black. It has a hole in each end.

Post-1900

A number of modern items were found in the uppermost strata. A black plastic and white metal equipment part with what appears to be internal threading on one end came from unit 25-D (Figure 5.113a and b).

Unit 25-D.Disturbed

Miscellaneous items from this stratum include a piece of heavy clear glass whose edge and upper portions are ribbed. The piece is reminiscent of glass shelving used on top of refrigerator crisper drawers, but the sherd is too small to determine this with certainty.

Two small, flat, rectangular carbon or graphite bars were found in unit 25-D. One was from stratum D and the other from the stratum immediately above. These artifacts measure 0.25 inch wide by 0.1 inch thick; the first is 1.5 inches long, and the second only 0.575 inch in length. They are similar in size to the carpenter's pencils illustrated in contemporary catalogs; or they may have been anodes from a small arc light of some sort, etc.

Seven pieces of thin yellow metal include one badly bent tubular piece which measures about 3/4 inch in diameter and is only about 3/8 inch long. The other fragments are fluted or ridged, and several appear to have fit around the tubular object (Figure 5.113c).

A small bright red item resembling a bent thumb tack with a splayed tip was found in this disturbed deposit. The gently convex head is 5/8 inch in diameter.

Shovel Tests

A bordered, caplike, conical yellow metal object was found in the shovel tests (Figure 5.113e). This small item measures about 0.425 inch in diameter and 0.15 inch thick. Its function is unknown.

A small, hollow, tapered ferrous item that appears to be made of a spiral wound, overlapped strip of thin ferrous metal was found in the 1985 shovel tests. This badly corroded piece measures about 1 inch long and tapers from 5/8 inch at the broad end to a little over 1/4 inch at the narrowest part.

CHAPTER VI: ARTIFACT DISTRIBUTION AND INTERPRETATION

CHAPTER VI: ARTIFACT DISTRIBUTION AND INTERPRETATION

INTRODUCTION

This chapter will consist of five major sections. The first will deal with the probable date of manufacture of the recovered artifacts. The second section will examine the spatial distribution of the Post-1900 deposits. The Gold Rush period artifacts provide the basic focus of the discussion in the third section which will attempt to delineate the source of the trash deposits. Because of the deposition patterns and the sampling biases[1] imposed during excavation no attempt has been made in this report to analyze the spatial distribution of artifacts in the Gold Rush period deposits, nor of those in the disturbed strata. A quantitative analysis of the items and the postulated range of activities they represent will be contained in the fourth section. The last section will conclude with a discussion on Skagway's conspicuous consumption period as reflected in the artifactual materials.

DATING

It is clear from historical documents and photographs that the Mill Creek dump must have been created sometime between the fall of 1897 and fall, 1899. Artifact dating and site stratigraphy also support this conclusion. Tables 6.1 and 6.2 illustrate the datable items from the Gold Rush and Post-1900 period deposits. Generally used date ranges for certain technological indicators such as two-piece molds, applied bottle finishes, etc., are not included in this list because other, more specific, dates are available. Table 6.3, a listing of datable artifacts from the disturbed strata of Unit 25-D, has also been included for informational purposes.

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[1] That is, the excavation units were dug into several different areas of a large trash dump which represented various episodes of deposition, sorting, and interleaving with alluvial materials.

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Table 6.1: Summary of artifact manufacturing dates, Gold Rush deposits.

ARTIFACT MANUFACTURING DATES		BEGINNING	ENDING	NO. OF	MEDIAN	1870	1880	1890	1900	1910	1920
Description	Reference	DATE	DATE	ITEMS	DATE						
Jesse Moore bourbon	Wilson & Wilson 1968:87	1897	1918	2	1907.5			■	■	■	
shoo-fly flask	Ferraro & Ferraro 1966:98	1890	1910	1	1900			■	■		
SB&G CO	Toulouse 1971:463	1881	1905	2	1893		■	■	■		
amethyst bottle glass	Reher & Broilo 1977:240	1880	1917	1	1898.5		■	■	■	■	
Davey & Moore bsmk	Toulouse 1971:153	1870	1900	1	1885	■	■	■			
vasaline jar	Berge 1980:75	1892	ca 1920	1	1906			■	■	■	
AB bsmk [A. Busch]	Toulouse 1971:26	1886	1907	1	1896.5		■	■	■		
Ball Mason jar	Toulouse 1969b:31-32	1895	1920	1	1907.5			■	■	■	
J.J. Heinz Co "79"	Herskovitz 1978:23	1888	1905	1	1896.5		■	■	■		
military	Herskovitz 1978:37	1875	1893	1	1884	■	■	■			
military	Albert 1977:40-41	1875	1902	2	1888.5	■	■	■	■		
UMC .30-.30 S	Barnes 1980:48 *poss.1902	1895	*1910	1	1902.5			■	■		
Meakin maker's mark	Godden 1964:552	1883	1889	1	1886		■				
fruit jar lid	Toulouse 1971:344-345	1885	1900	1	1892.5		■	■			
CALCULATED MEAN ARTIFACT DATE 1896.06 ± 7.93 (STANDARD DEVIATION)											

Table 6.2: Summary of artifact manufacturing dates, Post-1900 deposits.

SUMMARY OF ARTIFACT	MANUFACTURING DATES	BEGINNING	ENDING	NO. OF	MEDIAN						
Description	Reference	DATE	DATE	ITEMS	DATE	1880	1900	1920	1940	1960	1980
amethyst bottle glass	Reher & Broilo 1977:240	1880	1917	10	1898.5	■	■				
bright green glass	Ward et al 1977:240	1920	1986	4	1953			■	■	■	■
Mexican Mustang Linmt	Berge 1980:94, 97	ca 1880	1913	1	1896.5	■	■	■			
IPGCo base mark	Toulouse 1971:269-270	1902	1930	1	1916		■	■			
Hazel-Atlas base mark	Toulouse 1971:239	1920	1964	1	1942			■	■	■	
Red Raven Split	Devner 1968:79	1899	1911	1	1905		■				
plastisol lined cap	Lief 1965:40	1955	1986	1	1970.5						
CALCULATED MEAN ARTIFACT DATE = 1915.2 ±25 YEARS (STANDARD DEVIATION)											

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Table 6.3: Summary of artifact manufacturing dates, unit 25-D, disturbed deposits.

ARTIFACT DESCRIPTION	REFERENCE	BEGINNING DATE	ENDING DATE	NO. OF ITEMS	MEDIAN DATE	1860	1870	1880	1890	1900	1910	1920	1930
Pacific Club	Wilson & Wilson 1968:59	1890	1900	1	1895				■				
Davy Crockett bourbon	Wilson & Wilson 1968:114	1887	1905	1	1896			■	■	■			
Van Schuyver & Co.	Wilson & Wilson 1968:144	1870	1915	1	1892.5		■	■	■	■	■		
W F & S MIL basemark	Toulouse 1971:152	1896	1920s	2	1908				■	■	■	■	
S B & G basemark	Toulouse 1971:461	1881	1905	2	1893			■	■	■			
blow-and-blow process	Miller & Sullivan 1981:3	1886	1926	5	1906			■	■	■	■	■	
torpedo bttmd. soda	Stewart et al 1976:76-77	ca 1860s	1900	1	1880	■	■	■	■				
A.B.G.M.Co. basemark	Toulouse 1971:26-27	1886	1928	1	1907			■	■	■	■	■	
NB basemark	Toulouse 1971:377	1903	1937	1	1920					■	■	■	■
John Duncan and Sons	Toulouse 1971:277	ca 1880	1900	1	1890			■	■				
CS & Co Ld. basemark	Toulouse 1971:147-148	ca 1875	1913	1	1894		■	■	■	■	■		
IPG basemark	Toulouse 1971:168-271	ca 1902	1930	1	1916					■	■	■	
WT & CO	Toulouse 1971:544-547	1857	1935	1	1896	■	■	■	■	■	■	■	■
Kellogg's bourbons	Wilson & Wilson 1968:90-	1900	1917	1	1908.5								
CALCULATED MEAN ARTIFACT DATE 1901.35, ± 9.476 YEARS (STANDARD DEVIATION)													

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Gold Rush

The datable artifacts from the Gold Rush deposits were manufactured between about 1880 and 1910 (Table 6.1). Only two possibly intrusive items were identified in the trash deposits. The first is an aqua glass, machine-made bottle base with a basal seam and what appears to be a post-1903 automatic machine valve mark. The second is the base of an oval, clear glass shoe-fly flask bearing an embossed "P" inside a raised circle. According to Toulouse (1971:412) this mark was used by the Pierce Glass Company between 1905 and 1917. If intrusive, these artifacts may have reached the lower strata through a variety of means, such as rodents, gardening activities, root action, etc. (Aside from the disturbed portions of the upper strata of unit 25-D and two features in the Operation 21 test trench, no areas of disturbance were clearly documented for the Gold Rush period strata.)

If we exclude the two intrusive items, the terminus post quem, the "initial manufacture date of the latest artifact type present," is 1897 (Blee et al. 1986:71). The median date of manufacture has been figured for the temporally diagnostic artifacts in the collection, and statistical calculation designed to weigh the relative influence of each artifact (Blee et at. 1986:71-73) yield a mean artifact date of 1896.1, ±7.93 years (Table 6.2). The two intrusive artifacts mentioned earlier have been omitted from these calculations.

Determination of the mean artifact date is based on a formula developed by South (1977:217). Although South's process was designed to determine the mean date for ceramics, it has been used by Blee et al (1986:73) for other artifacts where the dates of manufacture are known as well.

This statistic tells us that the various artifacts were manufactured at various times, but were incorporated in the archeological record just prior to the turn of the century. There is often a lag time between the manufacture of an item and its disposition, so this figure is not inconsistent with what we know of the area land use and occupation.

Dates of other items present in the Gold Rush dump are also consistent with the range of manufacturing dates. For example, the presence of a railroad spike in the trash deposits suggests that at least some of the trash was dumped at the time of or following the period of railroad construction which began in June, 1898. Military items found in the Gold Rush period deposits most likely post-date August, 1899 when the soldiers of the 24th Infantry moved into Skagway. Of course it is possible that these items were brought into Skagway and discarded by ex-military personnel. Or, these military artifacts could have belonged to the troops of Companies A and G who were stationed in Skagway between late February and May of 1898. However, neither of these suggestions appears especially plausible. While the buttons and the pants buckle could have come from recycled military clothing, the helmet ornament parts would not ordinarily be the sort of item one wore to a gold rush. The 1898 Army camp in Skagway was situated between Main Street and the Skagway River, one and a half miles from the landing, and some distance across town from Mill Creek. Trash from this early dump would certainly have been dumped into the river or deposited on the west side of town, rather than hauled across town to the Mill Creek dump. It is much more logical to assume that the military items recovered from the disturbed deposits of unit 25-D and the Gold Rush period trash came from Company L personnel who occupied several of the buildings along Sixth Avenue, adjacent to the dump, between July 28, 1899 and construction of the Peniel Mission late that same year.

Post-1900 Deposits

As with the Gold Rush deposits, the majority of the readily datable items are embossed bottle glass (Table 6.2). While manufacturing information shows several items with a beginning date predating the twentieth century, the end dates all continue into the 1900s, most are consistent with the strata in which they were found. In several cases, the items (amethyst glass and the Red Raven Split bottle glass) were manufactured somewhat earlier than the strata and the rest of the artifacts would suggest. However, several categories of glass containers are often saved and reused, so these findings present no real problem.

The median date of manufacture has also been calculated for the Post-1900 diagnostics (Table 6.2), and for the disturbed deposits in unit 25-D (Table 6.3). The terminus post quem for the items from unit 25-D suggests that the disturbance post-dates 1903.

SPATIAL DISTRIBUTION OF THE POST-1900 ARTIFACTS

The discussion will include a short section on the spatial distribution of major artifact groups within the Post-1900 deposits. Analysis of the sheet trash deposits which accumulated adjacent to the Peniel after the turn of the century can help us understand the activities occurring in the vicinity of the Peniel Mission, and provide a basis for comparison with the Gold Rush materials.

Table 6.4 contains a numerical breakdown of all artifact groups and classes. Only artifact groups/classes with more than 3% of the total artifact count were charted. Although the Unclassified Group materials total 8.3% of the artifacts, they were not included in the distribution illustrations because of their non-diagnostic nature. It should be noted that the Operation 21 test trench was dug first, so artifacts from the northwest corner of Unit 25-A will be included in the test trench findings.

In drawing some conclusions from these data, it should be noted that the fairly sparse early twentieth-century deposits may not represent a full range of functions and activities. The deposits most likely reflect the activities of the inhabitants and users of the Peniel Mission and, early in the century, the unidentified structure(s) west and south of the Mission.

Table 6.4: Summary of artifact groups and classes.

SUMMARY OF ALL GROUPS AND CLASSES										
GROUP	CLASS	FILL	GOLD RUSH	MIXED	POST 1900	STS 1983	STS 1985	F202& 204	UNIT 25D DIST.	TOTAL
Activities	Activities	51	42	2	33	21	16		8	173
Ambiguous	Ambiguous	6	13		6		1		17	43
Domestic	Beverage Storage	93	2714	23	439	27	216		2682	6194
Domestic	Food Preparation		2							2
Domestic	Food Remains	38	671	64	32	11	103	6	209	1134
Domestic	Food Serving	90	838	51	92	12	176	23	328	1610
Domestic	Food Storage	306	7405	122	576	204	849	13	2270	11745
Domestic	Furnishings and Household	11	71		18	2	12		64	178
Domestic	Pharmaceutical	5	242	20	28	5	31		89	420
Personal	Personal	17	148	1	26	4	8	0	34	238
Structural	Hardware and Nails	335	3461	251	466	122	141	16	849	5641
Structural	Structural Materials	2324	647	59	599	168	77	5	818	4697
Structural	Utilities	24	596	3	82	8	37	10	570	1330
Structural	Window Glass	257	548	84	448	63	51	2	859	2312
Unclassified	Changed, Unknown, Whatsit	139	705	69	552	127	143	8	1375	3118
									0	0
TOTAL		3696	18103	749	3397	774	1861	83	10172	38835

It should be noted that the low concentrations of the beverage storage artifacts in the post-1900 strata appear to be related to random breakage or disposal of individual containers across the site. Obviously both the "new morality" of the early twentieth century and Prohibition must have affected the types and amounts of alcohol consumed in Skagway after the turn of the century. Problems with the Canadians also affected the liquor supplies in Skagway. The Daily Alaskan for May 19, 1899 (page 1) reported that the Dominion Government had prohibited the introduction of liquors into the Yukon district. This edict caused a great deal of consternation among well-stocked bar owners, and the result was that some of the Canadian liquor may have been smuggled into Skagway area. On the other hand, it may also have resulted in increased consumption before miners crossed over the border.

Since the frequencies of the individual nonstructural classes are too low to chart meaningfully, they were grouped together and illustrated in Figure 6.1. It appears that the post-1900 materials were concentrated about 10 feet west of the rear corner of the Peniel Mission. When Dr. Polly remodeled the Peniel in circa 1937, he removed the old shed-roofed addition which made up the rear of the building. Blee et al. (1984:431) state that the "shed roofed room 10 feet by 22 feet was [used] either for storage or a latrine, or both." The adjacent yard might then have been a convenient place to store garbage on a temporary basis, resulting in food debris in this area. It is possible that the area may have been used for such activities as picking chickens, preparing fruit for canning, etc. This area was also the closest of these excavations to the back door of the Peniel Mission.

Structural artifacts account for nearly half of the total post-1900 artifacts (46%, n=1,595), with most of these in the upper strata (Table 6.4 and Figure 6.2).

Nails and structural materials such as wood, brick, glass, and mortar make up the bulk of the artifacts recovered. Figures 6.3 and 6.4

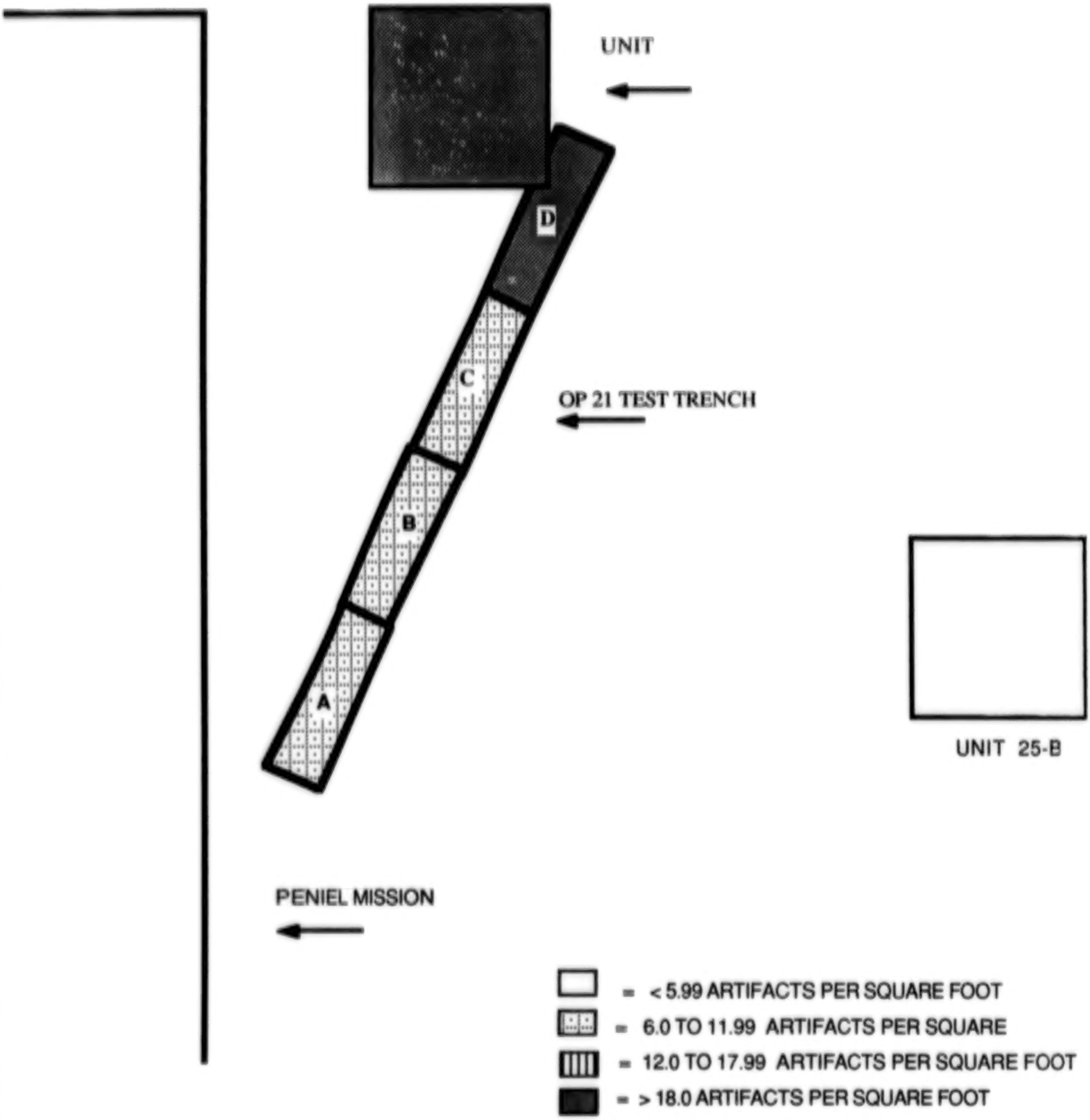

UNIT
D
C
OP 21 TEST TRENCH
B
A
UNIT 25-B
PENIEL MISSION
= < 5.99 ARTIFACTS PER SQUARE FOOT
= 6.0 TO 11.99 ARTIFACTS PER SQUARE
= 12.0 TO 17.99 ARTIFACTS PER SQUARE FOOT
= > 18.0 ARTIFACTS PER SQUARE FOOT

Figure 6.1: Spatial distribution of post-1900 non-structural artifacts.

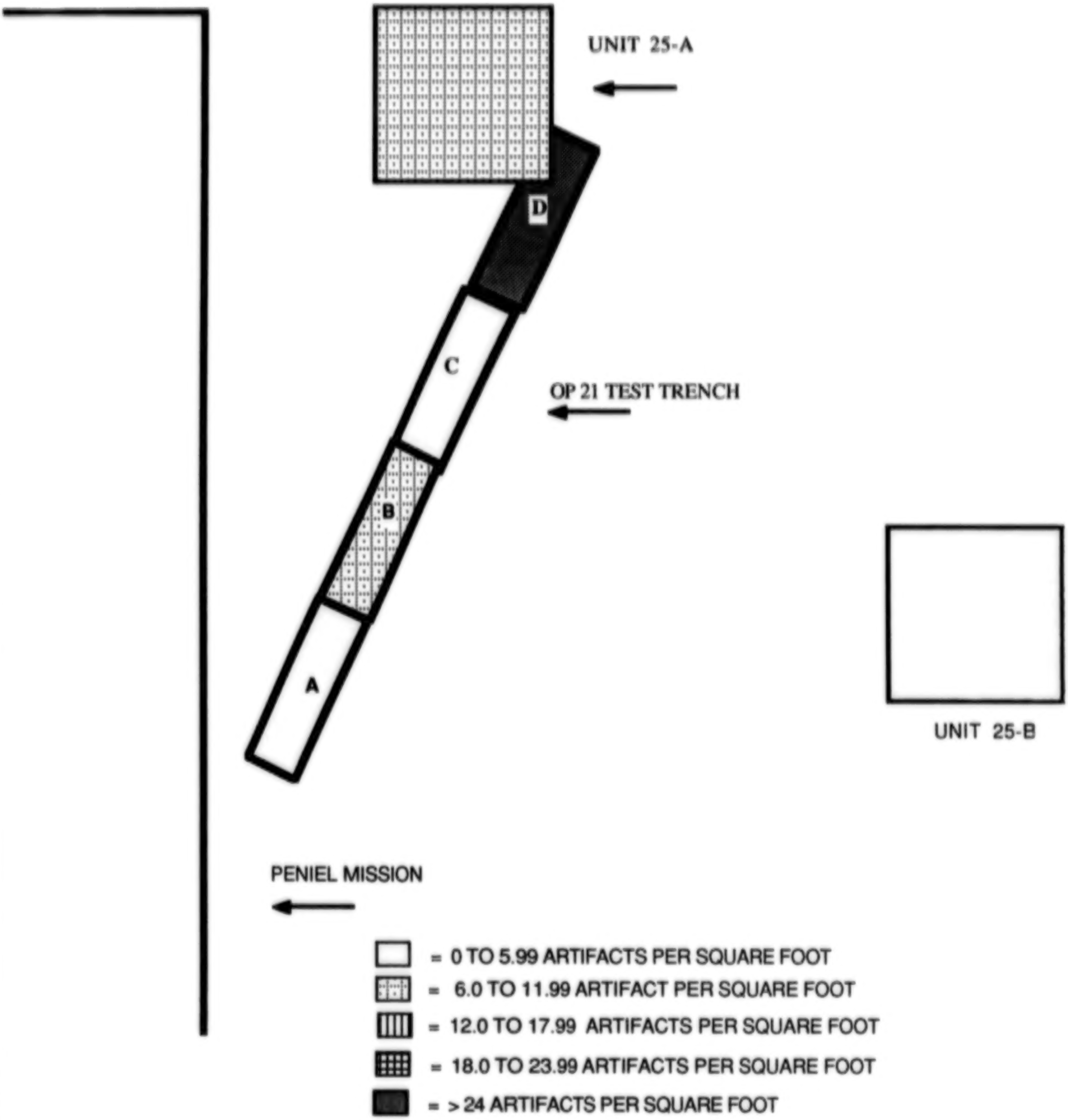

UNIT 25-A
D
C
OP 21 TEST TRENCH
B
A
UNIT 25-B
PENIEL MISSION
☐ = 0 TO 5.99 ARTIFACTS PER SQUARE FOOT
▨ = 6.0 TO 11.99 ARTIFACT PER SQUARE FOOT
▥ = 12.0 TO 17.99 ARTIFACTS PER SQUARE FOOT
▦ = 18.0 TO 23.99 ARTIFACTS PER SQUARE FOOT
■ = > 24 ARTIFACTS PER SQUARE FOOT

Figure 6.2: Spatial distribution of post-1900 structural materials.

show a further breakdown of the structural artifacts by class. The majority of the window glass comes from the upper strata. Two hundred forty-one pieces of window glass were found in the upper levels of unit C of the Operation 21 test trench, suggesting that a broken window (or windows) may account for the large artifact count in this particular area. Circa 1937 photographs of the Peniel Mission show two double-hung windows on the second story, towards the south end of the structure. The glass may also have come from some of the first floor windows which were installed after the 1937 photographs.

Quite a few nails were found in both the upper and lower strata with the highest concentrations adjacent to the Peniel (Figure 6.4). It is obvious from the historic photographs that Building I occupied the area west of the Peniel Mission at least into the first decade of the century. Therefore, the nail count cannot be solely attributed to construction or remodeling of the Peniel Mission, but may be related to this unidentified structure as well.

A light scattering of hardware was found in both upper and lower Post-1900 levels. Structural materials such as brick, mortar, and milled wood were present in fairly good numbers numbers across the tested area (Figure 6.2). A few utility-related items were included.

Figure 6.5 shows the distribution of all the post-1900 artifacts. It appears that the majority of the artifacts are concentrated towards the rear corner of the Mission. Photographs of the Peniel Mission taken during the circa 1937 remodeling project show piles of soil on the ground on the west side of the mission, but the area under the stairway appears to be relatively free of debris (Figure 3.19). Concentrations of construction materials found in level 1 and the lens of strata C (unit 25-A), suggest that structural materials may have been piled on the ground behind the stairway during, and perhaps after, the remodeling project.

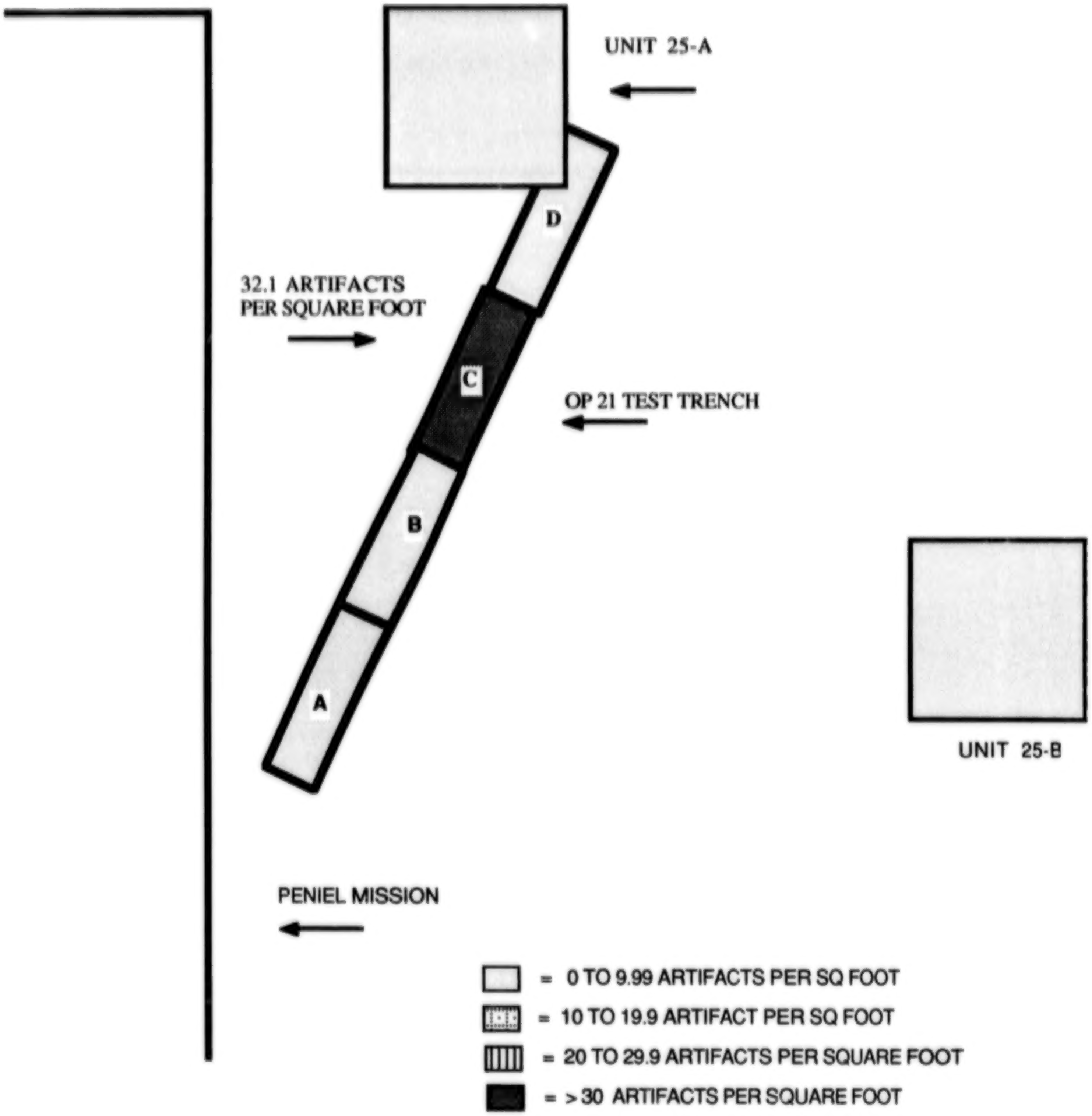

UNIT 25-A
D
32.1 ARTIFACTS PER SQUARE FOOT
C
OP 21 TEST TRENCH
B
A
UNIT 25-B
PENIEL MISSION
= 0 TO 9.99 ARTIFACTS PER SQ FOOT
= 10 TO 19.9 ARTIFACT PER SQ FOOT
= 20 TO 29.9 ARTIFACTS PER SQUARE FOOT
= >30 ARTIFACTS PER SQUARE FOOT

Figure 6.3: Spatial distribution of post-1900 window glass

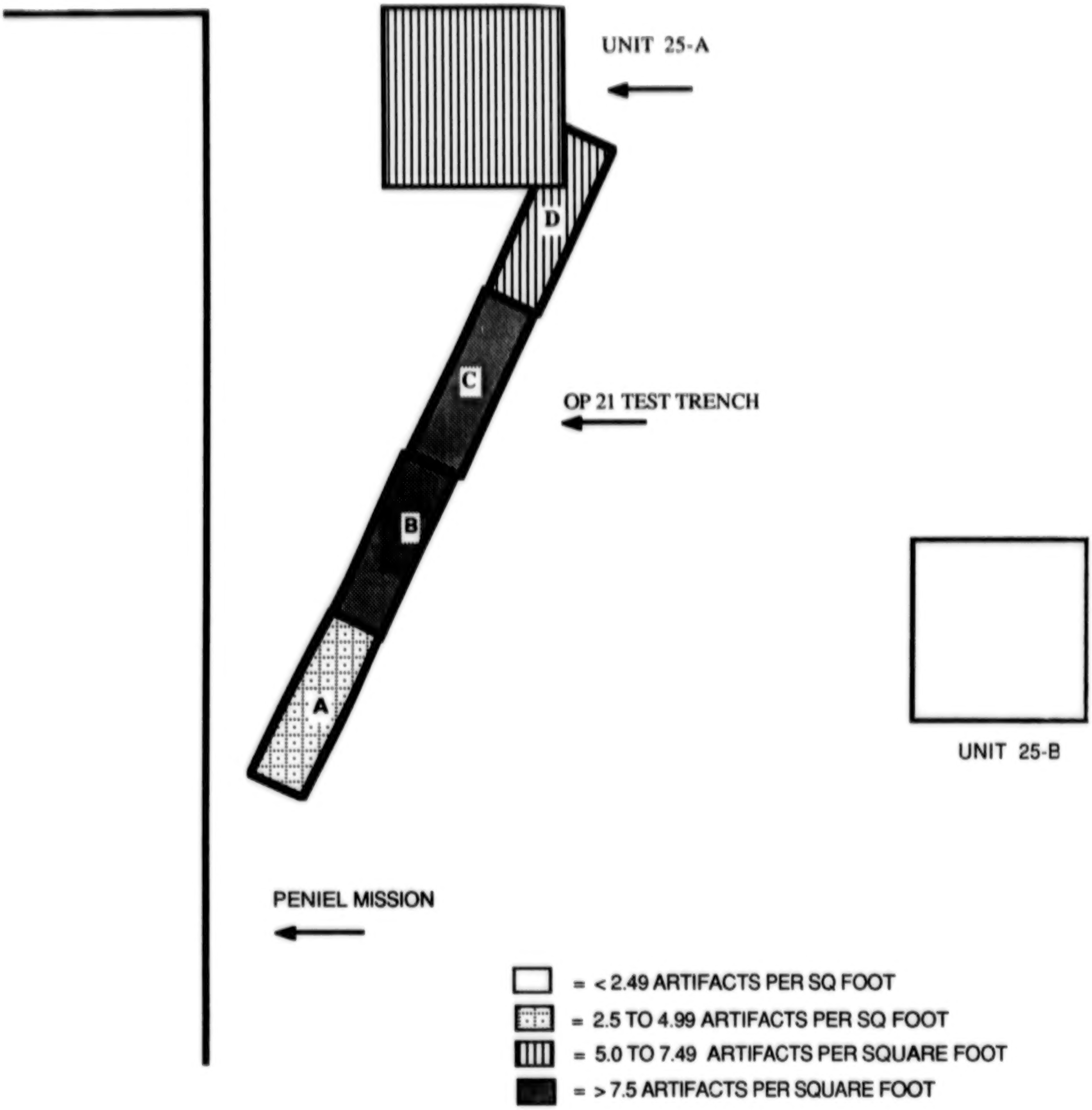

UNIT 25-A
D
C
OP 21 TEST TRENCH
B
A
UNIT 25-B
PENIEL MISSION
☐ = < 2.49 ARTIFACTS PER SQ FOOT
▦ = 2.5 TO 4.99 ARTIFACTS PER SQ FOOT
▥ = 5.0 TO 7.49 ARTIFACTS PER SQUARE FOOT
■ = > 7.5 ARTIFACTS PER SQUARE FOOT

Figure 6.4: Spatial distribution of post-1900 nails

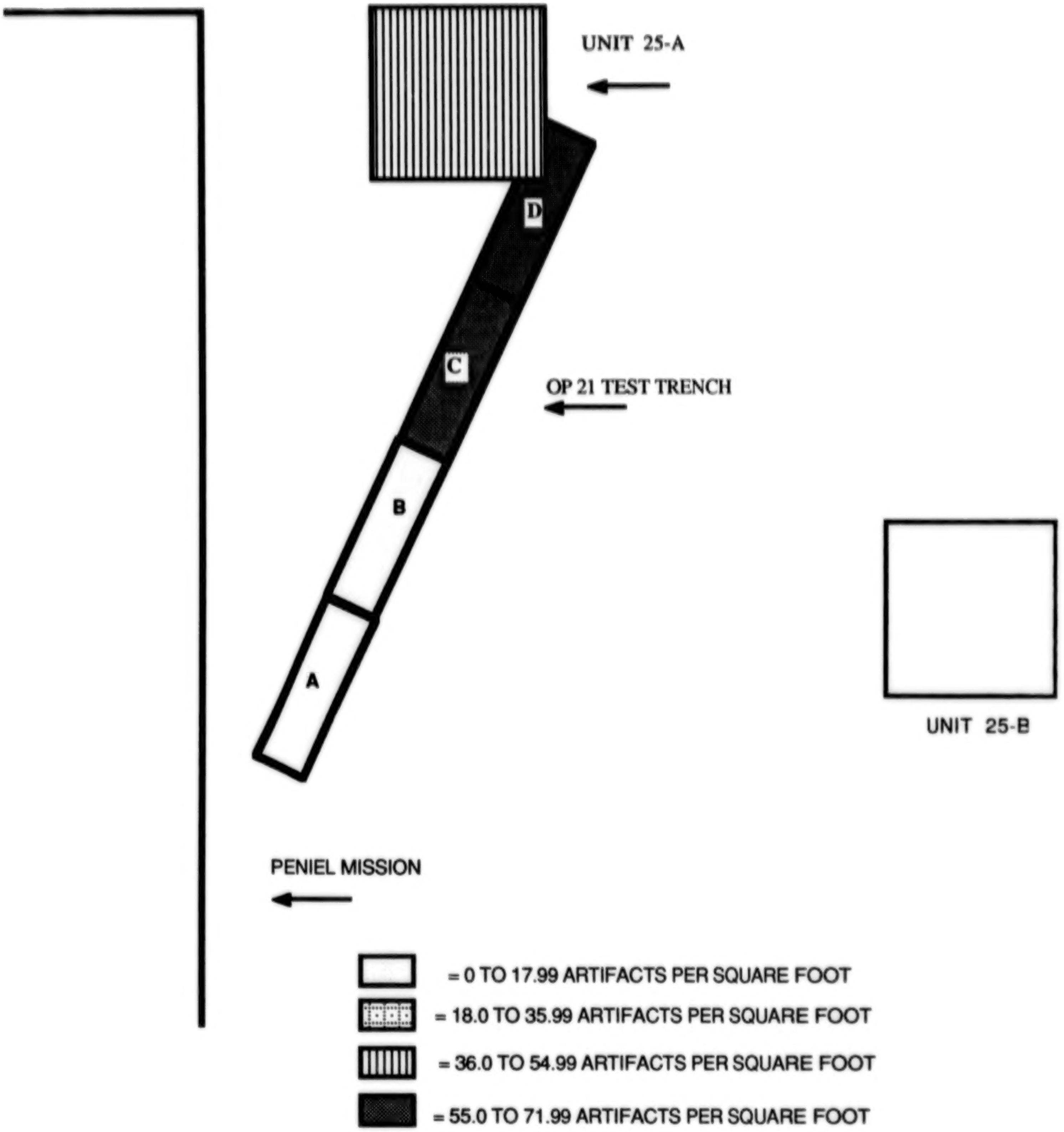

UNIT 25-A
D
C
OP 21 TEST TRENCH
B
A
UNIT 25-B
PENIEL MISSION
= 0 TO 17.99 ARTIFACTS PER SQUARE FOOT
= 18.0 TO 35.99 ARTIFACTS PER SQUARE FOOT
= 36.0 TO 54.99 ARTIFACTS PER SQUARE FOOT
= 55.0 TO 71.99 ARTIFACTS PER SQUARE FOOT

Figure 6.5: Spatial distribution of all post-1900 artifacts

No doubt the majority of the structural artifacts from the upper strata are related to the circa 1937 remodeling of the Peniel, and it can probably be assumed that most of the other artifacts are connected with the Peniel in some way. However, the depositional history of the artifacts in the lower strata is less clear. The shed-roofed building formerly situated at the rear of the Peniel Mission probably had an exterior exit into the yard and to the alley as well as an interior doorway into the Peniel. It is logical to assume that trash, unused materials, etc. may have accumulated adjacent to the structure, contributing to the higher artifact count in this area.

The other buildings on this block may also have contributed to the artifact deposition of the lower levels of the Post-1900 strata, both during their period of occupation and during their demolition or removal. The present lawn area of the Peniel and the open lots to the west and south were once occupied by several structures and small outbuildings, all crowded together on the narrow lot (Figures 3.8 through 3.16). The hip-roofed building directly west of the Peniel was removed sometime around 1910; no doubt this structure also had a back door leading to the alley, and possibly, small outbuildings used for storage, etc., in the vicinity. Insofar as can be determined from the historic photographs, only a narrow space, probably no more than 10 to 15 feet, separated the Peniel Mission from the structure to the west. This juxtaposition of buildings would have tended to channel traffic and incidental artifact deposition during the early part of the twentieth century, contributing to increased artifact count along the side of the Peniel.

Creation of the Dump

In the past, deposition of trash in a moving stream seems to have been a generally accepted disposal method. In fact, much of the town's garbage and "outhouse refuse" was dumped in the river bed just west of the city, at the ends of the east/west streets, causing a "reprehensible" situation, particularly with regard to sanitation (Daily Alaskan, May 19, 1899:4). The local Fire Warden ordered citizens to "take every such load to the tide flats on the south end of town at a place between the Juneau and the Seattle wharfs, . . . instructing them that all such deposits must be made at low tide and as far out as possible, so as to insure the incoming tide carrying away such refuse every day" (Ibid.).

We might then ask why this particular area of this particular stream (Mill Creek) was chosen for a dump? Much of the answer lies in Skagway's settlement patterns and political realities. Initially, Captain Moore helped shape the basic configuration of the city. The Skagway River valley is relatively small and narrow, presenting a fairly limited choice of land for a town site. Moore located his cabin on a high area near Mill Creek; his corrals and outbuildings were just north across the small stream (Figure 3.21). Moore built his wharves at the water's edge, in the southeastern corner of the narrow valley. His logging skid roads ran north/northwest from the wharf area, skirting the creek and the house and corrals on the west. The White Pass Trail followed the logging road for some distance and then, near the Moore cabin, cut west towards the Skagway River, providing a direct access route from the harbor area. As the early Klondikers flocked into Skagway, they located their tents and early frame structures immediately adjacent to the trail. After the townsite had been laid out, Sixth Avenue and Broadway quickly became the commercial center of Skagway. Later development grew outward from this nucleus until circumscribed by the river, the harbor, the mountains, and Moore's holdings. If the small five-acre parcel of land around the Moore cabin and corral and saw mill had not been set aside, this area would also have been overrun by the newcomers. As it was, Moore fenced his lot to protect what was left of the original homestead, thus preserving a small block of open land from development.

The bend in the western fork of Mill Creek was probably considered an excellent spot for a small dump; the land was undeveloped, little effort was required to rechannel the stream, there was a naturally depressed area to partially hide the debris, the running water would tend to dilute the odors and, hopefully, disperse some of the trash. The creek bed was centrally located and was accessible from the bridge on Sixth Street. The dump area could also be reached easily from the narrow alley which ran between Fifth and Sixth. This alley provided access to the small structures behind the Astoria Hotel and to the rear of several of the structures along the south side of Sixth Avenue before dead-ending at the Moore property (Figure 3.21).

Blee (1987:173, 188, and 308) suggests that the Moores were dumping their domestic garbage directly behind their cabin and house in the same creek. It is likely that most of the deposits in the vicinity of the Peniel Mission came from the town residents, primarily businesses, located in the general vicinity. It may well be that Moore encouraged dumping to fill up the stream inside his property to prevent erosion around the cabin and house area. There may have been a time during 1898 or 1899 when a deliberate effort was made to fill the creek bed with trash, cinders, etc. preparatory to widening and straightening Sixth Avenue between Broadway and Moore's Park. Filling in the western fork of the stream would have eliminated one stream crossing, and simplified bridge building on the newly widened street.

With the July 18, 1900 decision against Moore's homestead claim, there was a "scramble for lots east of Broadway" (Spude 1983:27). Filling the portion of the creek bed on city lots 2 and 3 would have made the property more valuable. In any case, the area had to be filled and levelled before the temporary Peniel Mission could be moved onto the lot, and before the new mission could be built.

Captain Moore built a three story mansion on the eastern portion of his lot in the winter of 1899-1900. In 1901 it was leased to Harriet Pullen who converted it "into Alaska's best-known hotel" (Spude 1983:160). Landscaping of the surrounding area accompanying the construction of the mansion may have included the rechanneling of Mill Creek. Once the mansion was built, the east branch of Mill Creek provided a pleasant pastoral setting for the elegant structure.

Thus the trash deposits may represent a series of disposal events occurring on a somewhat regular basis sometime between the fall of 1897 and the fall of 1900, or most may have occurred as a deliberately planned short-term effort to fill up the creek prior to construction activities. The deposits may also have come from one of the periodic city-wide clean-up efforts. It is clear that Skagway had a problem with garbage from the beginning of the Gold Rush. The constantly changing populace, numbering up to 10,000 by the spring of 1898, was crammed into the narrow river valley, producing extremely crowded conditions. Like most gold rushes, there was a frantic quality to the mass migration through Skagway. Horrendous trails and roads combined with severe weather conditions must have contributed to abandonment or waste of large quantities of goods. Period photographs show a great deal of trash scattered among the tents and frame structures and along the rutted streets. Early in March, 1899, the Daily Alaskan reported that

> the City council at its last meeting passed a motion requesting the citizens to get rid of the accumulated garbabe [sic] on their premises [since the] . . . many tons of filth, garbage and other refuse that has been allowed to accumulate throughout the winter in alleys, back yards and even on some of the streets . . . [poses] great danger from sickness (March 17, 1899:2).

In response to these exhortations, the town's good citizens and leading merchants took up their rakes and brooms to clean up the streets and alleys on Skagway Day in June, 1899 (Daily Alaskan, 1 January 1900:14). This spring clean-up was important, not only for sanitation, but to prevent the rush of spring visitors from viewing the "masses of filthy garbage" and the "cesspools in the alleys" (*Daily Alaskan*, 15 March 1900:2). The city council even went so far as to levy $10 fines for littering.

The more affluent could also hire a garbage collector. "Lauridson, the garbage man," could be reached at one of the local meat markets (*Daily Alaskan* 21 Mar. 1900:2). There is no record of just where Lauridson dumped the garbage he collected. A few clues as to the source of the garbage can be garnered from the nature of the deposits. Because the trash contained a *wide variety* of artifact types, both structural and non-structural, it appears that the garbage came from both commercial establishments and private residences. It is not likely that military items, lead type, numerous champagne bottles, and stocking supporters would all have been discarded by the same establishment or household. We know that military personnel occupied or used at least five of the structures on the south side of Sixth Street, east of Broadway, prior to 1900. Since several artifacts were of military issue, it appears that the Army was depositing some of their trash in the creek bed.

The variety of different patterns of ceramic and pressed glass found together in the dump point to deposition by several families and/or establishments. Further, the mixture of the sturdy, functional ironstone "Hotel-wares" and fragile, hand-painted porcelain plates and transferwares suggests both commercial and private use.

It is apparent from early photographs that there were both private homes and businesses in this area. The heart of the city's business district lay within a block or two of the dump. Such establishments as the Superior Barber Shop, The Bank (formerly the Pack Train Saloon), The Board of Trade ("The Finest Resort in All Alaska"), Burkhards General Store (largest assortment of clothing in town), the Mirror Saloon ("Only the Choicest of the Choice Kept in Stock"), the Alaska Meat Market, H. Fenz & Co. Tents, the Pioneer Jewelry Store, the Colorado Lodging House, and the Skaguay Oyster Parlor were nearby (*Daily Alaskan*, April 1899).

The large quantities of some artifact types also suggest multiple deposits by a variety of producers. As an example, the large number of nails of different types recovered suggests the cumulative refuse from a number of construction, renovation, or demolition efforts. Large quantities of bottle glass also suggests discard by a business rather than a private residence.

Lists of retail items from one of the tent stores along the White Pass Trail illustrate the wide variety and occasionally esoteric nature of the goods stocked for the Klondikers.

Burning

It is not clear whether garbage deposits were dumped into the stream bed and then intermittently burned over in place, or if burned and unburned garbage were dumped into the creek bed together. It is most likely that a combination of methods was employed. Burning is a traditional method of garbage disposal still practiced in the Skagway area today, and the garbage heaps in the creek bed may well have been burned on a periodic basis. On the other hand, the large quantities of cinders, the highly vitreous, glassy-appearing slag, and cinders and partially burned coal obviously represent residue cleaned from stoves. Some of the cinders may also have come from the railroad engines. It is logical to assume that most of the scrap wood from building construction and demolition found its way into community heating and cooking stoves. Only a small proportion of the artifacts such as glass, ceramics, and wood show evidence of heating or burning. This suggests that most of the trash was dumped, unburned, into the creek bed along with charcoal, cinders and clinkers and the small pieces of unburned coal that had dropped through the stove grates. In unit 25-A a small percentage of burned and heated artifacts were mixed with large quantities of unburned artifacts in a matrix that was almost solid cinders. This indicates that these items were dumped into the creek rather than being burned in place.

Some of the heavily burned or melted artifacts are amalgamated with clinkers, and there is quite a lot of very fragmentary, highly calcined (burned) bone, most of it bird bone. The greasy bone marrow probably burned quite hot, contributing to the calcining process. Probably some of the food-related garbage (particularly debris from poultry or game birds) was burned in a coal stove before its deposition in the creek along with the cinders. This simple method of wet garbage disposal would tend to cut down on odors, flies, disease, and problems with animals digging through the garbage.

Alluviation

Depositional patterns also define periodic episodes of alluviation. That is, the undulating surfaces and interfolded strata in the lower portions of the Operation 21 test trench and in units 25-A, B, and D are consistent with repeated dumping interspersed with intervals of waterborne infill. The majority of the artifacts in the dump were highly compacted, and the alluviation apparently did not seriously compromise the integrity of the deposits by floating away or sorting lighter, smaller objects. For example, pieces of milled lumber and other light-weight artifacts found mixed with combustion products in the lower strata of test unit 25-B indicates that a) the stream bed was probably dry or fairly low when the trash was deposited, and b) this particular pile of trash was not burned over in place.

The patterning of the deposits implies that instead of garbage deposition in a rapidly flowing stream, the materials were dumped into an almost dry creek bed which was covered sporadically by high water. Generally speaking, the smaller, lighter objects in the dump were not water sorted but were mixed indiscriminately with cans and heavier debris. An extremely high tide flooded the southern portions of Skagway on August 19, 1899. It is possible that waterborne silts covered over the debris previously dumped in and along the small creek during this high tide. Heavy rains and spring runoff would also contribute silt to the dump area.

FUNCTIONAL ANALYSIS

The classificatory system and the interpretation of artifact patterning used in this report are based on the assumption that in any cultural system there is an "internally consistent array of functional artifact categories, an array that may be altered by variations in cultural behavior" (Martin 1985:13). Generally speaking, similar artifact types, and similar proportions of those types, tend to occur in historical archeological sites despite the age or function of the site. For example, most historic sites contain some sort of structure. Nails, pieces of wood, pipe, etc. lost or discarded during construction, razing, or deterioration contribute to the archeological record. Non-structural artifacts of one sort of another are also ubiquitous at a historic site because humans have been present. Because of these factors, comparison of the most frequently appearing artifact types among different sites of similar age or among different artifact types at the same site through time can yield a great deal of information about the activities taking place at the site and the community of which it was a part.

The following section provides a quantitative analysis of the artifacts found in the Peniel Mission excavations. This discussion focuses upon the functional analysis of the artifacts, and upon the probable range of associated activities these artifacts represent.

Functional Distribution

Analysis of the functional distribution of the artifacts is based on comparisons of the relative percentages of statistically frequent artifact types. In the entire collection, 55.97% of the materials are from non-structural classes, 36.0% are from structural classes, and 8.0% are unclassified (Table 6.4). The Food Storage Class leads the artifact frequency with 30.24%, followed by Beverage Storage (15.95%), Nails and Hardware (14.53%), Structural Materials (12.09%), and Window Glass (5.95%).

Three-fourths of the artifacts come from just four artifact classes. As can be seen in Table 6.4 the rest of the artifact classes contain less than 5% of the total artifact count each. Because such classes as "Personal," "Activities," etc. are so low, and thus contain very little functional information, they have been lumped into one category labelled "Other" in the figures accompanying this discussion.

There are some readily noticeable differences between the Gold Rush period deposits and the Post-1900 collections itemized in Table 6.4. Obviously, there are differences in quantity between the Gold Rush period artifacts and materials from later deposits. The dump represents a concentration of large numbers of artifacts deposited over a short period of time (n=18,103); the later deposits contain incidental sheet trash (n=3,397) created slowly over three-quarters of a century.

These differences are also qualitative. During the Gold Rush, non-structural artifacts such as beverage containers and food storage items, from food or drink related activities, outnumbered the structural artifacts proportionally, 69.6% as compared to 30.4%. After the turn of the century, there are more structural artifacts, 57.2% compared to 42.8% non-structural classes.

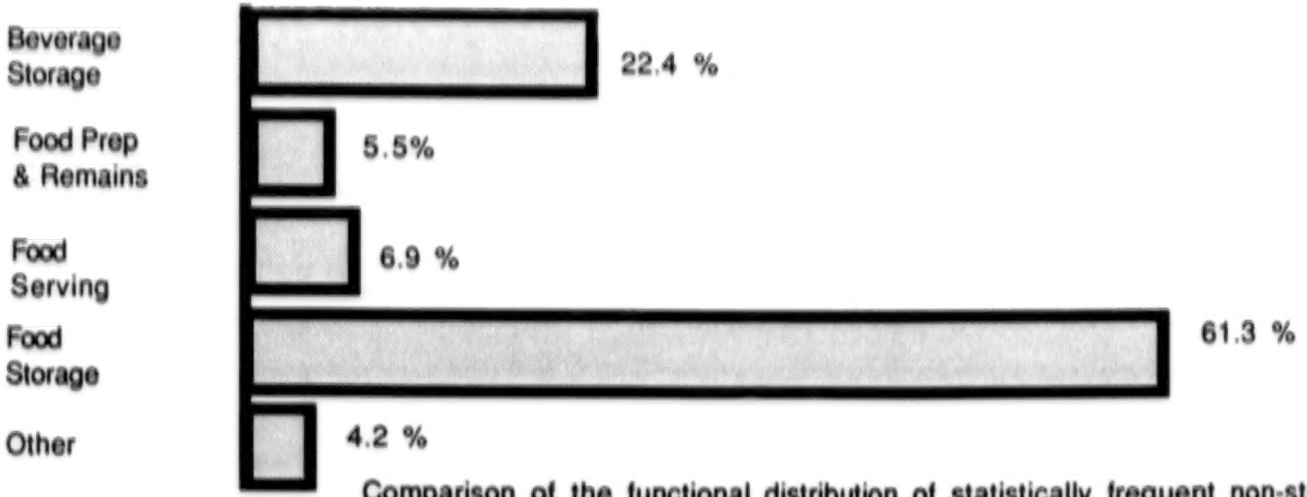
However, these figures must be read with caution. While ceramic or glass sherds tend to be fairly finite and their numbers easily definable, such artifacts as brick, mortar, charcoal, cloth, bone, etc. can pose a real collection bias because of their tendency to decompose differentially and to crumble upon contact. Brick and mortar have variable fragmentation rates, depending upon a number of factors, including manufacturing methods and materials, secondary burning, weathering, etc. Wood poses similar problems. In addition, the excavated wood was collected only when it was apparent it had been used for construction activities or had been cut.

Tin can fragments are another excellent example of this problem. Skagway's moist soil conditions and wide variations in temperature contribute to the rapid deterioration of ferrous materials, such as cans, causing rapid deterioration of a single object into dozens of small, amorphous fragments. Figure 6.4 shows that Food Storage artifacts account for nearly a third of the total artifact count. However, almost three-fourths of the Food Storage Class total consists of tin can fragments whose numerous small fragments have skewed the total artifact count in this class sharply upward.

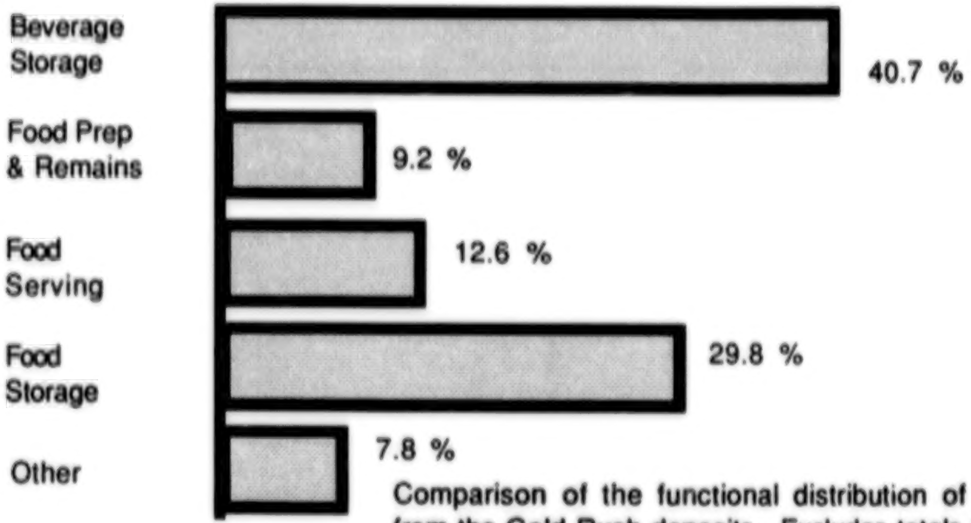
Because other sites might not experience the same types of conditions leading to deterioration, it is difficult to compare Skagway's highly fragmented tin cans with, for example, Death Valley's largely intact ones. Bottle glass, also variably fragmented, is unlikely to be affected by preservation conditions. Inter- and intra-site comparisons are thus possible with the more stable artifact classes.

For the above reasons, in the following section two classes, the Food Preparation and Remains Class and the Structural Materials Class, have been omitted from much of the quantative analysis. In addition, the tin can fragments have been deducted from the Food Storage Class for purposes of this discussion. Figure 6.6 illustrates the functional distribution of the statistically frequent non-structural artifacts with and without the tin can fragments. Clearly the Beverage Storage category is most affected by the presence of the cans. Unclassified Materials were also excluded because of their amorphous nature and lack of identification as to their original function.

The remaining categories include the "Other" Food Storage Class (lacking the tin cans). This class is made up almost entirely of curved glass sherds and portions of canning jars, condiment bottles, etc. along with a few closures and wrappers. The Beverage Storage Class has a similar composition, with a few closures and large numbers of curved glass sherds from various types of wine, liquor, beer, and soda bottles. The Food Serving artifacts came originally from a variety of dinnerware types used to serve food and drink, and this class consists almost totally of ceramic and glass sherds. For the purposes of this discussion, the



Comparison of the functional distribution of statistically frequent non-structural artifacts from the Gold Rush deposits. Includes totals for tin can fragments.



Comparison of the functional distribution of statistically frequent non-structural artifacts from the Gold Rush deposits. Excludes totals for tin can fragments.

Figure 6.6: Comparison of functional distribution of Gold Rush period non-structural artifacts

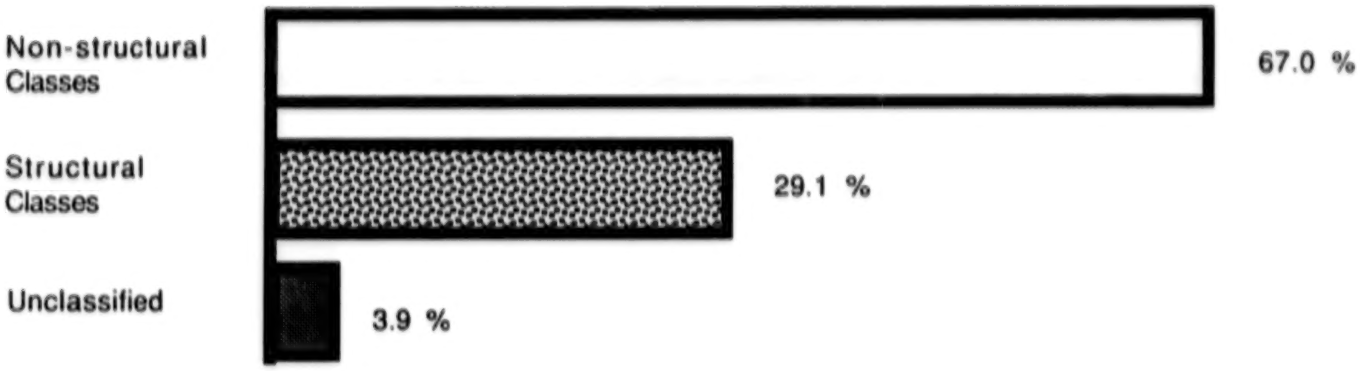
Structural Group includes the following classes: Window Glass, Nails, Hardware, and Utilities. The reader is referred to earlier discussions and Appendix A for the contents of each of these Classes.

Comparison of Classes

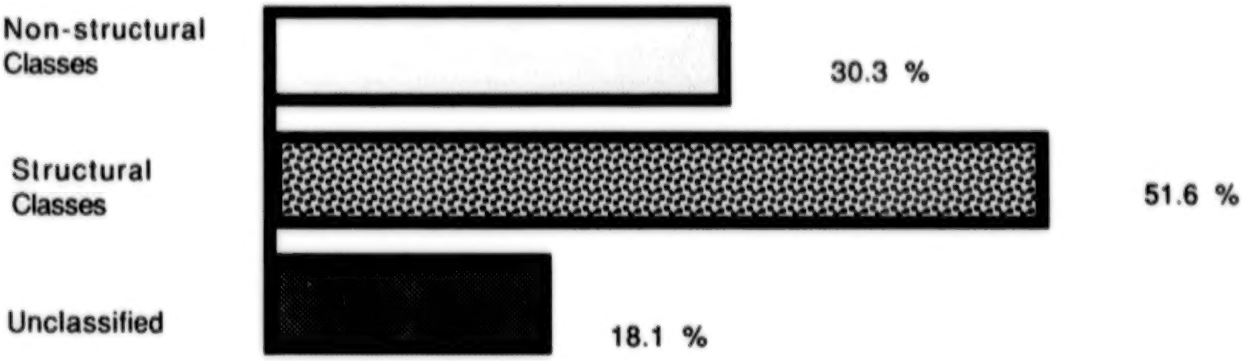
As Blee et al (1986:270) point out, it is not appropriate to compare different classes whose artifacts may have reached the archeological record through different processes. For example, deposition of structural artifacts, related to the construction, repair, or demolition of buildings, is unrelated to the process whereby bottle glass accumulates. Thus, comparisons will be made between classes within a given group.

The classes have been divided into two general categories: Structural and Non-Structural. Unclassified items are shown in Figure 6.7 but are omitted from later figures. Comparisons among these two categories and among the classes within the categories can be seen in Figures 6.7 through 6.9. Even with omission of the anomalous classes (Figures 6.8 and 6.9), the differences in the proportions of structural and non-structural items are strikingly obvious. Proportionately more non-structural items were deposited in the Gold Rush dump, and fewer structural items. The reverse is true after the turn of the century.

Of course, these percentages are in part colored by the different types of deposits being compared, the solid trash deposits of the Gold Rush versus the scattered sheet trash of the Post-1900s. It appears, however, that the larger structural percentages from the later period reflect the construction activities occurring at the Peniel site, particularly the extensive remodeling project undertaken by Doctor Polly in 1937. For example, the Peniel Mission was originally painted yellow before the new siding was installed. Several sand lenses and numerous fragments of milled lumber, including two with yellow paint, were found in the eastern half of unit 25-A. These pieces of painted lumber and sand piles are no doubt from the mid-1930s remodeling project. However, since structural materials appear in both the lower and upper strata of the Post-1900



Total Gold Rush



Total Post-1900

Figure 6.7: Distribution of all artifact groups, Gold Rush and Post-1900 deposits.

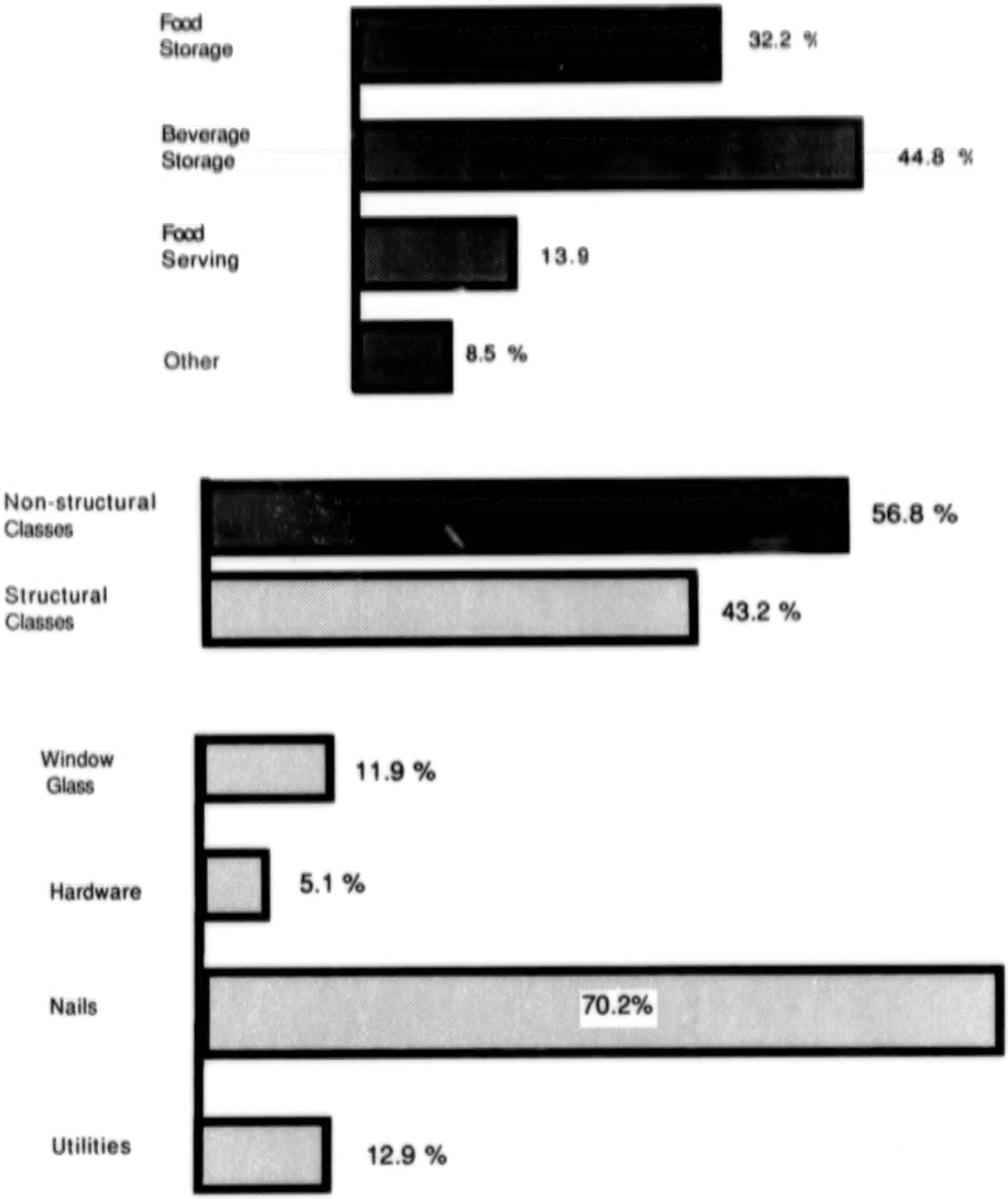


Figure 6.8: Comparison of the functional distribution of statistically frequent classes in the Gold Rush deposits.

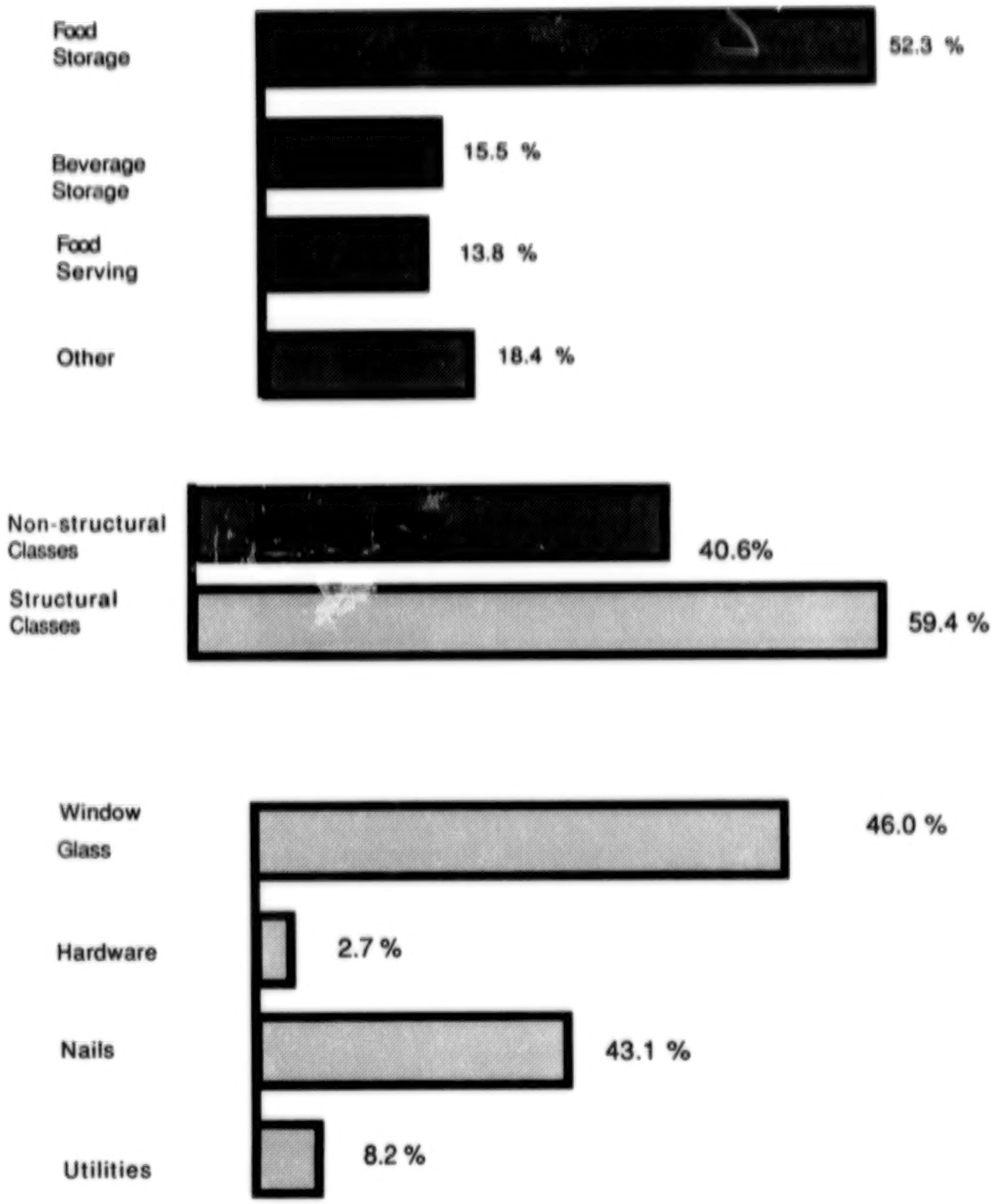


Figure 6.9: Comparison of the functional distribution of statistically frequent classes in the Post-1900 deposits.

deposits, it is probable that the structural materials are from more than one source. That is, the removal or razing of several other adjacent structures, most of which were built during the Gold Rush and removed after the turn of the century, would also have left evidence in the archeological record.

The large number of nails from the Gold Rush deposits compared to the post-1900 period, also is in character with the known history of the city (Tables 5.1 and 5.7). During the Gold Rush, the intense building program seemingly created buildings overnight. Structures were moved from one part of town to another, and combined into larger structures quite routinely. Fires destroyed a number of the hastily erected wooden buildings; it would not be surprising if much of the debris, including nails, from a destroyed structure found its way into the dump. These factors, plus a sense of haste and the ready availability (in Skagway) of supplies probably also contributed to the loss and discard of numerous nails. Common, flat-head 8d nails predominate, probably because this size nail could be used for most general building activities. On the other hand, there is a fairly good assortment of nail sizes and types, reflecting a variety of probable uses and building activities.

Proportions of hardware in the Gold Rush period deposits were double that of the later period. This difference probably results from the use of the Gold Rush dump by a number of establishments while the post-1900 deposits came from the activities of only a select number of households/businesses.

One of the most apparent differences in the two periods is the amount of window glass recovered. In the Gold Rush Structural classes, window glass represents only 10.43% of the total while window glass in the post-1900 deposits accounts for 28.0% over a fourth of the total. The glass in the Gold Rush deposits may have come from several sources. The most likely source is the collected garbage from several establishments or homes. On the other hand, there were several structures situated immediately adjacent to the creek, and it may well be that broken window glass from these buildings fell onto the dumped materials in and along the creek. The flat glass in the post-1900 deposits probably came from the Peniel Mission and, possibly, other nearby structures. Normally a number of factors such as storms, children's games, and lack of maintenance contribute to window breakage. Breakage from normal wear and tear may also have been heightened by abandonment. During the economic depression that hit Skagway after the turn of the century, a number of structures were abandoned and/or moved. Abandoned buildings, particularly those slated to be razed, are more likely to have broken windows than are working businesses and occupied homes. There were several periods during which the Peniel was unoccupied, and some breakage may have occurred during these times. The same may be true for the adjacent structure(s) whose final disposition is presently unknown.

Even though the structural materials such as linoleum, brick, and mortar have been omitted from Figures 6.8 and 6.9, it should be noted that these items are present in large quantities (Table 6.4). This is particularly true of the post-1900 collection. The early portion of the twentieth century was one of demolition and remodeling in Skagway, activities which produce numerous structural debris such as discarded bits of brick and mortar, scrap wood, and linoleum. Almost all of the hastily built early Gold Rush structures were of wood, and used metal flues. It was not until the turn of the century that the community began to use brick for chimneys in a serious way. The structural figures may also reflect some of this difference.

Within the Structural Group, the proportionate numbers of artifacts in the Utilities Class were 11.4% for the Gold Rush period, compared with 5.1% during the twentieth century.

Food Serving and Other Classes make up 6.9% and 9.8% respectively of the Gold Rush artifacts; Post-1900 deposits have 7.4% and 11.4% of these same classes. The Activities and Ambiguous Groups contained relatively more items after the turn of the century, contributing to the larger percentages for the combined "Other" Class after the turn of the century. It must be kept in mind, however, that the Gold Rush deposits reflect a short term deposition by a number of establishments, and the Post-1900 deposits reflect a long-term deposition by fewer units.

In addition to the Structural Classes discussed earlier, there is another area of difference between the Gold Rush and the Post-1900 deposits. Excluding cans from the calculations, proportionate amounts of Beverage Storage artifacts accounted for 40.4% of the Gold Rush non-structural classes and 43.0% of the Post-1900 deposits. Food Storage artifacts contributed 29.4% of the adjusted Gold Rush non-structural findings and 56.4% of those same classes after the turn of the century.

CULTURAL CHANGE IN SKAGWAY

Four phases of evolutionary development, described in Chapter II, have been suggested as a means of categorizing and understanding the swift process of cultural change that occurred in turn-of-the-century Alaska and Canada (Burley 1979:2). The first three phases, those especially relevant to the Skagway story, will be reviewed to provide a historic setting for the next section, a discussion of specific aspects of "Algerism" and "conspicuous consumption."

Historic Context: In less than five years, Skagway grew from a modest frontier homestead into a booming gold rush port town, and then, when the boom waned, became a quiet, middle-class American railway town. Simple, adaptive, egalitarian values espoused by early miners were rapidly replaced by the active pursuit of riches and fame as newcomers poured into the area. At the same time, the local merchants and professionals, "suppliers of goods and services," had begun the process of settling-in, or gentrification (Gleeson 1987).

Alaskan frontiersmen were participants in an egalitarian cultural system. Experienced individuals like Captain Moore "faced and adapted to one of the most severe and inhospitable climates in North America" (Burley 1985:18-19). These self-sufficient prospectors and traders shared "a common cultural heritage" based on "the principles of communal organization and egalitarianism. . . . Honesty, sharing and egalitarian values were esteemed virtues." Food and goods were shared, and a sense of kinship linked the early prospectors. While these individuals were highly mobile and isolated, they "fostered a considerable degree of regional interaction" (Ibid.).

Once the Gold Rush began, this egalitarian community was overwhelmed, in both "numbers and influence" by the inexperienced newcomers who brought with them a new set of values which emphasized "wealth accumulation, competition and individualistic action" (Burley 1985:22). Skagway is an excellent example of this second phase of Alaskan settlement, illustrating the incursion of twentieth-century American urban values and principles into an egalitarian cultural system.

It is doubtful that many of the ill-equipped newcomers to early-day Skagway intended to build a town or impose their values upon the North; their only interest was in furthering their own goals, in reaching the interior and the gold fields. Why did thousands of individuals undertake such an incredible journey? The answers lie in the political and economic factors that fueled the dream. The crash of 1893, caused by overexpansion of the railroads, speculation, bank failures, and

> uneasiness of European businessmen . . . . precipitated the worst economic depression the country had experienced to that time, and the panic bore all the earmarks of a permanent disaster. . . . the American Dream had turned into a nightmare" (Satterfield 1978:26-27).

In the 1890s there were few social welfare programs to give a sense of hope and relief to the hungry and homeless; it would be another four decades before Social Security and WPA. The 1890's were a "period of psychic crisis" (Satterfield 1978:27).

However, there were precedents for those who dreamed of overnight wealth. A half century of major gold rushes in California, Nevada, Colorado, Idaho, Arizona, and other western states supported the popular Horatio Alger myth of a poor boy who, "with his pluck and luck," was able to rise "from rags to riches." Alger's hero, who "embodied a whole constellation of popular aspirations," was also able to change his social status, becoming someone of importance (Encyclopedia Britannica 1962:614). Unfortunately, west coast merchants who promoted the Rush failed to explain the difficulties of the journey to the thousands of eager Klondikers (Blee 1987).

Many Klondikers also sought adventure. Years after his trek to the gold fields, a Klondiker named Walter Starr explained that "the frontiers of our west . . . were becoming too civilized for many who were looking for a new frontier. They contributed their quota to the stampede" (Starr 1960:ii).[3] A small book entitled "In Search of El Dorado" spoke of the "instinct of delight in this adventure which has dazzled the mind of man from time immemorial is universal. . . ."; these "true romances" came from "the magic of the search" (MacDonald 1905:vii-viii).

Contemporary newspaper accounts helped the rush along. The Seattle Post Intelligencer reported that the steamship Portland carried "more than a ton of solid gold on board" on July 17, 1897, when she entered customs (Satterfield 1978:32). The newspaper article went on to fuel the dreams of the hopeful noting that "fortune seemed to smile on the inexperience men. . . ." (Ibid.:133). It seemed to thousands of Americans and Canadians that the dream and the adventure were within reach (Satterfield 1978:33). Would-be prospectors dropped their work and headed for the steamship ticket offices. Newspapers and magazines printed "special Klondike editions, complete with maps" (Satterfield 1978:35). Business in rations and supplies boomed in Seattle, Portland, and other west coast ports. Lists of provisions appeared in the papers and the Klondikers spent most of their remaining wealth to purchase supplies. The last great gold rush had begun, and with it a profound change in the existing sociocultural systems of Alaska and northwestern Canada.

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[3] Starr's family fortune had been swept away by the 1893 panic; his total legacy as a young man of 20 was about $1,000, which he spent to get to the Yukon.

Burley notes that a "disdain for wealth accumulation" characterized many of the old-timers. This attitude resulted in annual sprees or blowouts during which the miner's poke (earnings) was spent "in the highest fashion of extravagant living" (Burley 1985:19). Originally, these sprees occurred on the "outside" during the winter season; the miner could usually be found in the company of peers with whom the extravagances were shared. However, the sprees did not represent conspicuous consumption to impress or to establish a higher rank in society; it was an act of sharing, of redistribution of wealth among one's peers. In other words, this ritual "kept prospectors at similar economic levels and solidified social integration" (Ibid.). As places like Dawson and Skagway grew, the spree was moved "inside" as miners moved from "bar to bar, buying drinks for all encountered" (Ibid.).

Of course, some miners took their earnings back to the "outside," removing them from this select group. Those that remained were soon faced with a new set of values and perceptions. It did not take long for some of the newcomers to discover that an industrious (or, in some cases, larcenous) individual could make a great deal of money, with less work and pain, from selling goods to Klondikers than he or she could from the distant gold fields. In an article entitled "The True Story of Skaguay" an unnamed writer noted that at first the routes to the interior were "crowded with all classes and conditions of men". . . . Politics, religion, even home and family, were, for the time being, lost sight of in the mad desire to reach the golden country" (*The Skaguay News*, 31 December 1897:1). However, it was not long before

> *enterprising men* always found in the vanguard of civilization, and who had engaged in diverse kinds of business, foresaw that at this place would be built up a large city; the future metropolis of a great territory . . ." (Ibid.) [emphasis added].

The spending habits of the miners coincided nicely with the acquisitory interests of these "enterprising" individuals. For about nine months after the gold strike, Skagway was a raw, open frontier town where the egalitarian values of the old timers, the sourdoughs, collided head-on with those of the cheechackos, the newcomers. The formerly effective miners' courts were soon unable to cope with the onslaught of humanity who brought with them a whole different set of urban values, including crime.

This change was reinforced economically also. The availability of goods of all types in Skagway via the daily steamer gradually built reliance upon outside economic and material support systems. Abuses such as the overrunning of Captain Moore's homestead and the illegal sale of lots reinforced individualistic behavior and a strong concern for personal property rights. With the changing times, the miner's spree, once a mechanism for sharing and economic redistribution, gradually assumed a new shape; conspicuous consumption became classic behavior pattern in urban areas across much of the North.

Newspaper ads in the Skagway paper give us a few hints of this change. Advertising in the early issues of the paper (1897) was fairly prosaic, promoting local hosteleries, suppliers, meat markets, horseshoers and blacksmiths, architects, builders, restaurants, and the local stove factory. However, it was not long before virtually all sorts of goods and services became available; choice cigars, dressmakers, real estate. Attorneys and doctors set up shop; a new bank opened, and the saloons flourished as never before. The Principal Barber Shop and Bath House of Skaguay, across the street northwest of the present location of the Peniel Mission, advertised: "Everything First Class, Hot and Cold Baths. Private Room for Ladies. Open all night" (The Skaguay News, 13 January 1899:1).

Gradually the advertising began to stress the elegance and cosmopolitan nature of both the product and the consumer; ads for exotic imported foods, lace curtains, the "Choicest and Purest" liquors and exclusive luxury clothing appear alongside the outfitters ads for long underwear and granite pans. "Genuine Ribbed Silk" and "Imported English Terra Cotta Cashmere" was available at the A.L. Cheney & Co. 21 Broadway; or "a swell line of Dark Navy Blue Kersey Top Coats, Satin Lined" could be had at the Boston Store (The Skaguay News, 6 January 1899:3). An ad for the Skaguay Brewing Company (producers of a local beer) shows an elegant, tuxedo-clad patron lounging in a chair, holding a drink. This same figure was reused in other ads for other products as well; it may have typified the idea of elegance and class to the consumer for whom the ad was written.

Wholesalers set up major warehouses in Skagway. With the opening of the railroad, much of the equipment purchased for the trail was no longer necessary, and local businesses became less concerned with outfitting individual miners. Instead, the finest of foods, wines, cigars, and entertainment were provided. For example, "The Grotto, Refitted and Reopened by Clancy & Nash" claimed to be the "Finest Gentlemen's Resort in Skaguay, GAMES IN CONNECTION . . . (The Skaguay News, 24 February 1899:4).

Exotic foods were imported for the consumer. The Skaguay Oyster Parlors offered

> Fresh Puget Sound and Eastern Oysters, In any and Every Style. Holly St., Next door to Mondamin . . . Finest Oyster Cook on the Coast, ELEGANT SERVICE, PRIVATE ROOMS (The Skaguay News, 24 February 1899:1).

Authors such as Conlin (1986:119-120) have noted the preference of miners for fancy foods. For example, champagne and oysters

> were the 'symbols of wealth' with which it was customary to celebrate good fortune. . . . The result was that curious juxtaposition of rude frontier and sparkling elegance that fascinated chroniclers and distinguised the miners' frontier from those pioneered by trappers, loggers, soldiers, ranchers, and farmers.

This dichotemy between elegance and squalid misery was also apparent in other areas of the mining frontier as well. Hastily erected shacks became restaurants whose tables were set with the latest in china and silver, on linen tablecloths. Bars boasted elegant furnishings and a wide selection of drinks. Conspicuous consumption became the poor man's way of celebrating, of relieving the tedium of Alaska's long cold winters, and most important, a way of keeping faith with the miners' dreams of fame and fortune.

In line with the perceived role as the San Francisco of the North, and stung by the initial experience with frontier justice and unscrupulous business deals, Skagway gradually began to embark on a self-improvement campaign by mid-1898 (Spude 1983:42-43). Not only was this effort directed at improving law and order, and building schools and churches, it included the socialization of certain elements of the community. Social clubs were formed, and it apparently became important to observe certain social niceties. Newspaper columns carried advice on salad preparation and gala social events. Pianos and organs became available in Skagway, along with dancing lessons.

As part of the community concern for Skagway's orderly development into a wholesome and beautiful city, several measures were taken to clean up the town, and to cut down on the consumption of spiritous liquors. According to historian Robert Spude, "Skagway's 80 illegal saloons [were] fined $100 each" in January, 1899 (1983:18). On June 14, 1899 a vote was taken on the saloons, resulting in "463 vote[s] for saloons and 68 against" (Daily Alaskan, 1 January 1900:14). Undaunted, concerned citizens pressed for more controls, and were able to pass a $1,500 liquor license law effective July 1, 1899. This law was effective in the closing of many local watering holes (Daily Alaskan 1, January 1900:14). By the early months of 1900, there remained sixteen licensed saloons in Skagway (Daily Alaskan, 1 January 1900:8).

By the turn of the century, Skagway had become an urban area, a major transportation and economic redistribution center. The railroad linked this tidewater community to the interior. Daily steamers brought the best goods from southern ports for this cosmopolitan community whose residents were drawn from a dozen or more nations. The gentrification of Skagway, the transplanting of typical American values and material goods and a class oriented social structure, had made a major impact upon the culture of this frontier Alaskan outpost.

Archeological Evidence for Conspicuous Consumption

As stated previously, the classification and interpretation of the artifact patterning is based on our assumption that cultural systems have a rather consistent array of functional categories. This array can be changed by variations in cultural behavior. By "detection of variations from modal artifact frequencies and proportions" (Martin 1985:13) we can both discover and explain specialized functions and behavior.

Therefore, we should be able to see a reflection of conspicuous consumption in the Mill Creek deposits. Somewhat different types and quantities of artifacts should result from conspicuous consumption as opposed to the self-sufficient "use it up, wear it out, make do attitude" espoused by most frontiersmen. Some historical archeologists have used proportionate measures of ceramics (expensive porcelains vs. inexpensive whitewares) to indicate economic status. However, in the case of the Peniel Mission collection this is not feasible. The ceramics recovered from the Peniel Mission present only a small sampling, and include a number of utilitarian ironstone vessels thought to have been used in restaurants rather than private homes.

Another approach to the problem might be analysis of the artifacts to discover items that provide evidence of frugality. For example, such artifacts as mended ceramics, recut bolts, and wired harnesses attest to the reuse and reworking of original materials. Only one such item has been defined in the Peniel Mission collection; that is, a rectangular piece of leather was cut from the sole of a well-worn shoe, presumably for use elsewhere.

Articles of clothing can give clues to the social status of the owners. In the case of the Peniel deposits, the buttons present a broad spectrum of clothing types, ranging from the fabric-covered metal buttons which were probably used on a woman's coat or dress, to the shirt studs necessary for white dress shirts of the period. Present also were the ubiquitious Prosser ceramic buttons and some bone buttons which could be found on the most utilitarian costume, from a miner's long underwear to a child's blouse.

Champagne and Beer Bottles

However, one aspect of the collection from the Mill Creek dump bears further examination. The large quantities of bottle glass found in the dump attest to the consumption habits of the local population. Based on other investigator's findings that there is a correlation between glass color and bottle function (Blee 1983b:56; Baugher-Perline 1982:271-272; Teague and Shenk 1977:114), glass sherds from the Peniel collection were classified into two basic categories. Aqua and colorless glass sherds were placed in the food storage class; brown and green glass was put into the beverage storage class. It is presumed that most olive green glass was used in wine and champagne bottles, and that brown glass held beer or strong spirits. Pharmaceutical glass was separated out by form. Other colored sherds such as amber and blue were also separated morphlogically.

More olive green glass was recovered from the Mill Creek dump than any other color. A total of 2,714 beverage container fragments and closures was recovered from the Gold Rush period deposits, and 439 items came from the Post-1900 deposits. Comparison of the brown and green glass from the Gold Rush and Post-1900 periods indicates that proportionally more olive green glass was found in the early deposits; 1855 items (71.2%) as compared to 237 sherds (28.8%) in the Post-1900 collection (Table 5.11). The assortment of brown glass is just the reverse, 751 sherds of 28.8% of the Gold Rush period brown/green glass compared to 43.8% (n=185) for the Post-1900 deposits.

It is likely that the major portion of the olive green glass in the Peniel Mission collection is from champagne or wine bottles. This contention is supported by the fact that 68 olive green bottle base sherds in the Gold Rush collection are either from a deep kick-up base or a base made in a turn mold, presumably most of which belong to wine or champagne bottles). Somewhat similar proportions hold true for Gold Rush period bottle finish sherds; 23 of the 28 sherds (82%) are definitely from wine or champagne bottles. Six wine finish sherds and one olive green bottle base sherd were found in the Post-1900 materials. Since the latter is embossed, it is not from a turn-mold made wine or champagne bottle. If these figures were drawn from only one portion of the Mill Creek, we might assume that disposition of the wine/champagne bottles was a discreet event, or represented the trash from one establishment. However, the olive green glass sherds are found in several areas of the site.

Percentages of curved glass from the Mill Creek dump were compared with figures from five other sites dating to about the same period (Figure 6.10). These sites share many characteristics but differ in others. One of these sites, the Reward Mine, is situated not too far from Casa Grande, Arizona on the Papago Indian Reservation. The total time span for this copper mining complex was from about 1879 to 1915 (Teague 1980). The mine was worked by British immigrants, Mexicans, and Native Americans who lived on or nearby to the site. The mining complex received supplies and transportation via the stage line which ran to Casa Grande at regular intervals. In turn, Casa Grande was an important supply center and railhead.

The second site chosen for comparative purposes is the Harmony Borax Works at Death Valley, California (Teague and Shenk 1977). This plant was built to process ore at Harmony in late 1883 or early 1884, and went out of business in 1888. This site had excellent transportation connections with San Francisco, upon which it depended for goods.

The Harpers Ferry assemblage comes from the back yards of a complex of combined residential and commercial establishments in a small community in West Virginia (Blee 1984). The data used for comparison dates from 1900 to the present.

The Navajo sites date between about 1880 and the present time (Ward et al. 1977). The data were collected at a series of isolated household sites on the Navajo Indian Reservation in Arizona.

The Skagway depot site (Blee 1983b) dates from about the same period as the Peniel Mission. The depot was a public building where drinking was not encouraged.

It is obvious from Figure 6.10 that olive green and dark green bottle glass percentages from the Peniel Mission are larger than the average from other period sites. Two of these sites, the Reward Mine, and Harmony Borax, have green glass percentages close to the 38.5% found at the Mill Creek Dump. However, at the Reward Mine, totals for brown glass are almost identical for the green glass; other types of glass have lesser percentages. This suggests that beer consumption nearly equalled the consumption of wines and champagnes at the Reward Mine.

At Harmony Borax, the patterning is very similar to the Skagway depot findings. That is, the collection contains a relatively high proportion of green glass to other types, with colorless glass making up a strong second place. At both Harmony Borax and the Mill Creek Dump, brown glass makes up less than 16% of the total. The major similarity between the two sites is the regular transportation and supply route directly from the San Francisco suppliers. On the other hand, Harmony

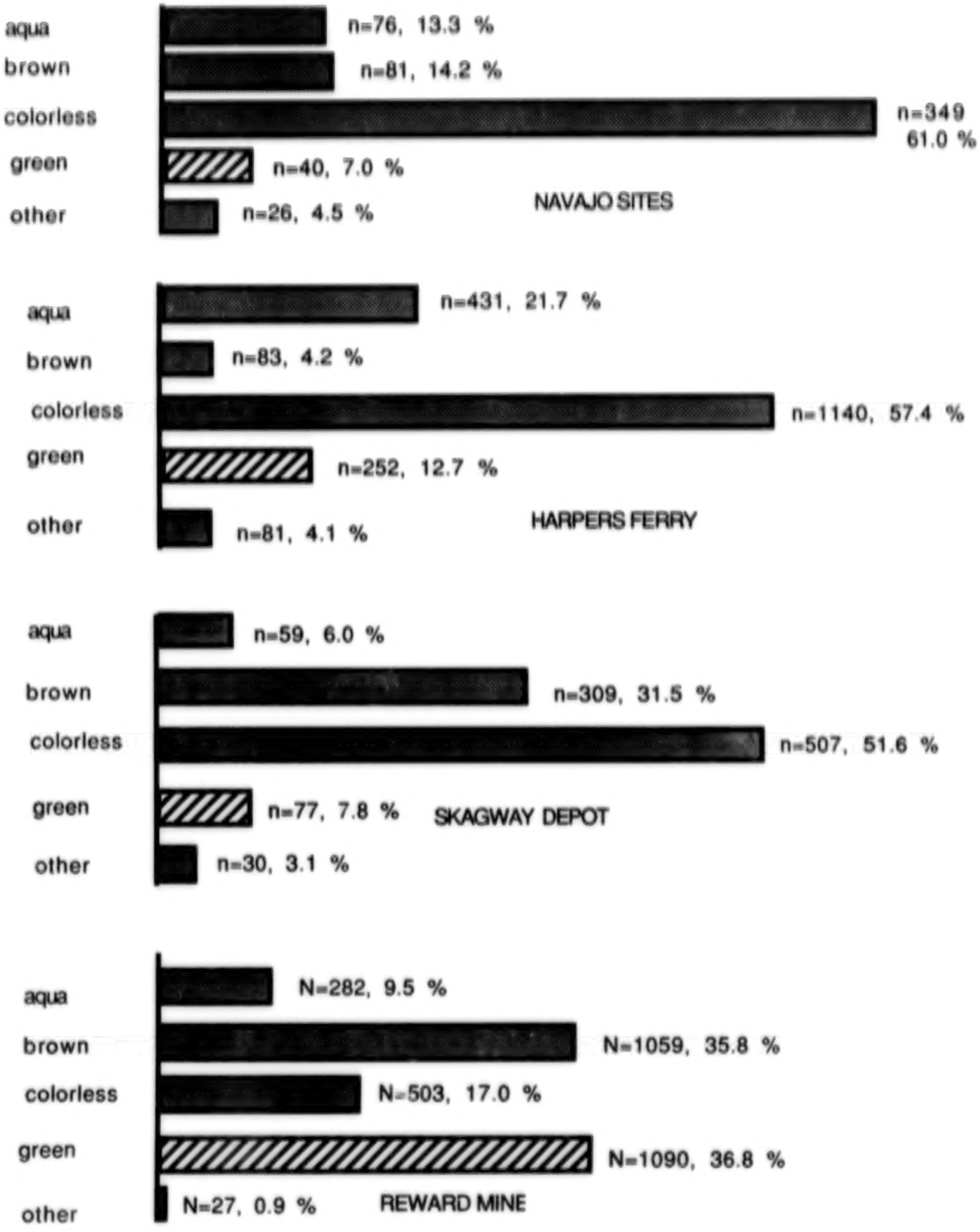
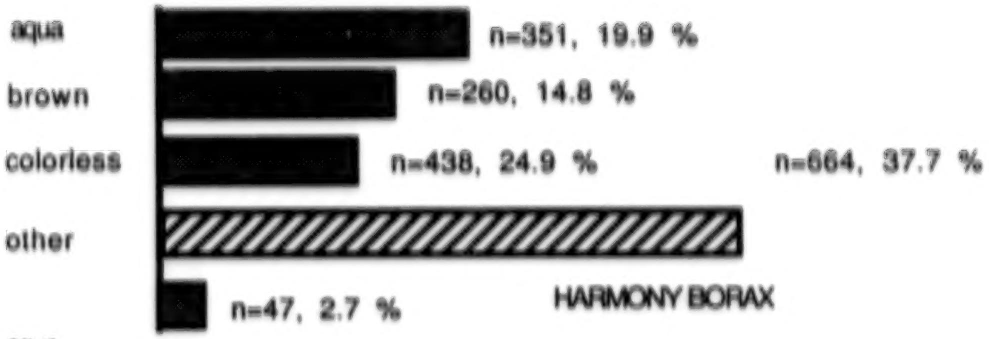
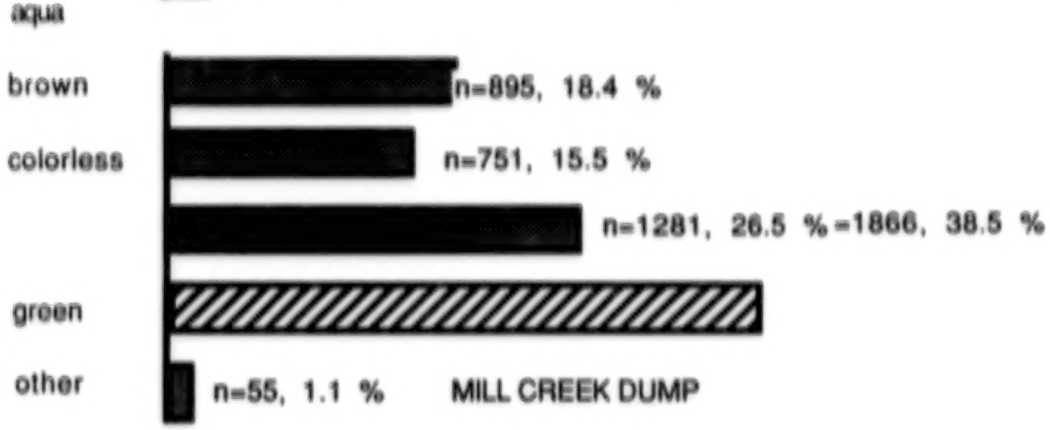


Figure 6.10: Proportions of curved glass from six sites.


aqua
brown
colorless
other
n=351, 19.9 %
n=260, 14.8 %
n=438, 24.9 %
n=664, 37.7 %
n=47, 2.7 %
HARMONY BORAX


aqua
brown
colorless
green
other
n=895, 18.4 %
n=751, 15.5 %
n=1281, 26.5 %
=1866, 38.5 %
n=55, 1.1 %
MILL CREEK DUMP

Borax predates the Mill Creek site by about 10 years. Effective bottling and shipping of beer were still in their early stages. The lower proportions of brown glass may reflect the availability of beer as well as consumer preferences at Harmony Borax.

The relatively high frequency of olive green bottle glass to brown glass in the Mill Creek dump suggests that champagne and wine were the preferred beverage to beer and other distilled alcoholic beverages. The preference for the more socially prestigious beverages may reflect the process of social change in Skagway. After all, what better drink was there for those whose wealth and power was only a gold strike away? Perhaps it was not bourbon that won the North after all, but rather champagne.

CHAPTER VII: SUMMARY OF ALL EXCAVATIONS

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CONCLUSIONS

Site Chronology

The city of Skagway, Alaska, and the Mill Creek site were shaped first by natural forces which defined the narrow river valley and later by the land use and settlement patterns which were heavily influenced by Captain Moore's landholdings and developments. The Mill Creek dump, situated partially on Captain Moore's reserved five acres and immediately adjacent to areas of the townsite, was created sometime between the fall of 1897 and the fall of 1899. The area belonging to Captain Moore had been in use as a corral, and was fenced.

The dump deposits appear to be a mixture of items from commercial establishments, private homes, and the military. Some of the garbage in the dump was evidently burned in place, and the rest consisted of burned materials from furnaces and stoves mixed with unburned artifacts. The presence of a mere handful of amethyst-colored glass sherds among the numerous colorless glass fragments suggests that the broken glass was not exposed to the sun for any great length of time before being covered over.

From the unsorted nature of most of the trash, it appears the garbage was dumped into a nearly dry creek bed, rather than in a running stream. The alluvial deposits surrounding and intermixed with the artifacts were probably the result of occasional flooding by a high tide, or backwater from spring run-off.

Sometime during the fall or winter of 1899, the trash-filled creek bed, a now abandoned branch of Mill Creek, was covered over with fill of unknown origin, and the Peniel Mission was built on the lot, immediately adjacent to several Gold Rush period structures.

For the next decade, the Peniel missionaries occupied the structure, conducting services and serving the community. By 1910, hard times forced the closing of many of the city's businesses, and the Peniels left Skagway. Over the next quarter of a century, little is known about the sporadic occupants of the mission building, or of activities occurring in its vicinity. Some time during the period the rest of the Gold Rush period structures were removed, leaving a flat area of lawn surrounding the turn of the century building.

In the mid-1930s, the structure was purchased by Dr. Clayton Polly, a dentist newly arrived from Juneau. Dr. Polly remodeled the building extensively. He changed the false front, added a hip roof and new siding, put in a new foundation and an exterior stairway, and built a new addition on the south end of the structure. He set up his practice upstairs. After about ten years, Dr. Polly sold the Peniel; it went from one owner to the next before its acquisition in 1978 by the National Park Service. The building was remodeled again by the Park Service, and fill was imported from the depot area to level the lawn area.

Site Significance

This site is significant because of the contributions it can make to the story of the Klondike Gold Rush. It provides a unique opportunity to see the Gold Rush in Skagway as a great deal more than the oft-repeated tale of Soapy Smith versus the honest miners and townfolk. Contrasts between the gold rush boomtown with its conspicuous consumption and all night saloons, and the sedate post-1900 community occupied with railroading and tourism can illuminate the process of cultural change which occurred so rapidly in Skagway.

The Mill Creek dump contains the essence of the 1897 to 1900 period in Skagway's history, a time of significant cultural change. It illustrates the "Horatio Alger ethic," the belief that given a little luck and hard work, a poor individual could not only make it rich, but could attain a new social status.

The Post-1900 deposits cover the second part of Skagway's history, a period marked by struggle and community effort, a time when the fortunes of the town would rise and fall with the economic health of the Canadian mines and the railroad.

However, the Peniel Mission site is only a part of a much larger area, the Skagway historic district. The major importance of the Mill Creek dump lies in its potential contribution to the understanding of the gold rush on a grand scale vis-a-vis the historic district and the city of Skagway. At the present time, the Mill Creek dump is unique among archeological resources in Skagway, in that it represents the material culture of the heyday of the Gold Rush. All other known archeological deposits are mixed with later periods. As such it is a valuable source of comparative data with which to discover cultural processes taking place at a time of dramatic culture change in Skagway.

ARTIFACTS

Non-Structural Activities

Gold Rush period Skagway was at once a self-contained city where almost any service from smithing to brewing could be obtained, and a community totally dependent upon the "outside" for supplies and the interior for economic support. The Skagway of the late 1890s did not lack for any of the amenities of life--good food, clothing, housing, recreation, medical care. Regular transportation was furnished on incoming steamers; the city had elected officials, a city government, wide streets, running water, electricity and telephones. Profit-making was the raison 'de etat for many a Skagway resident. This is a great contrast to the sparse and arduous life of the typical miner, living on beans and sourdough while scraping a living from the frozen earth, and sharing his sporatic riches with his comrades of pick and shovel.

The trash deposits in the Mill Creek dump mirror the abundance of imported goods available in Skagway. These deposits contained a great deal of domestic refuse connected with eating and drinking, with smaller amounts of food serving artifacts, food remains, and pharmaceutical items. This trash was mainly tin cans and glass beverage, food, and pharmaceutical containers. The large amounts of food related deposits reflect the make-up of the city with its dozens of restaurants and saloons, built to serve the transitory population. The variety and amounts of kitchen debris also emphasize the nature of Skagway as a major redistribution center where all sorts of supplies were readily available. Should an item not be found in the city, it could be shipped in on the next steamer. Even the earliest tent stores included such prosaic items as lemon squeezers in their stock.

This abundance stands in contrast to the stripped-down cache of supplies taken to the Yukon by most miners. The suggested one year's supply of goods had to have items that were non-perishable and unbreakable. This meant that canned goods and dried foods, almost entirely staples like condensed milk, flour, bacon, coffee, made up the bulk of the food stuffs. Every emergency from frostbite to a broken axe had to be anticipated and planned for months and miles ahead.

The town was served by several drug stores, two hospitals and a number of physicians and dentists. Under these circumstances, the presence of a number of pharmaceutical items is not surprising. Given the status of medical knowledge at the turn of the century, most people did a great deal of their own doctoring, and patent medicines abounded. The Seattle Post Intelligencer recommended that Klondikers take along a medical chest and a long list of medications (21 July 1898:n.p.).

Conspicuous consumption appears to have been the rule rather than the exception in early-day Skagway. However, our stereotypic view of whiskey and beer as the universal beverages that conquered the West is in question in Skagway. While there are sherds of beer, whiskey and brandy beverage containers and flasks present in the dump, the lead bottle seals and copious amounts of broken glass from wine and champagne bottles attest to Skagway's lively night life and the search for status and the American dream.

Turn of the century North America was in the midst of technological change. This is reflected by the mixture of bottle types found in the dump; crown tops and semi-automatic machine-made items were found with those having hand applied lip finishes, as well as a single pontil-blown item. The identifiable bottle glass also documents the dependence of Skagway upon such port cities as Seattle and San Francisco for goods and supplies.

Imported foods came not only from the United States, but meat was imported from as far away as Australia, and fancy marmalades and condiments were shipped from England. The mixture of imported domestic animals, game, and exotic foods such as pheasant and frogs legs is documented both historically and in the dump deposits. These imports show clearly the nature of the status change sought by the hordes of individuals who had left behind unemployment or menial jobs to come to Alaska.

Like many other Americans of the time, the residents of Skagway apparently considered English ceramics superior to American wares, and a number of items made in the British Isles were found in the deposits, along with the durable and utilitarian ironstone wares chosen by public eating establishments. Also included in the food serving artifacts are ornate pressed glass items and a number of handpainted and polychrome decorated wares so popular with Victorian consumers. Other ceramics artifacts once belonged to wash basin and pitcher sets, or to commodes. These too are lavishly decorated in the best Victorian manner.

It is evident from the near total absence of graniteware and tin serving and food preparation utensils that this dump was an urban affair, containing few of the prosaic items proscribed for travel to the Yukon.

Only a few poignant reminders are left of the individuals who participated in the birth of the city. The buckles and buttons and supporters found in the trash dump are somewhat representative of this schizophrenic collaboration of would-be millionaires and grizzled miners. For example, the assorted buttons range from the collar studs and fabric-covered dressy types, to military, to ordinary bone and Prosser buttons for everyday wear. The well-worn shoes discarded in the dump also vary in type and style from heavy footwear designed for work and mud to fine dress shoes.

Much of history of Skagway during the Gold Rush has focussed upon the men, the miners, the businessmen, and the renegades. Of course spirited pictures were taken and anecdotes told of the female camp followers, and of a few intrepid community leaders such as Harriet Pullen. However, much less has been written about the women who came to Skagway to contribute to the community, women like Mrs. Tooley and Miss Carnahan of the Peniel Mission, or the women who campaigned for schools and churches and clean streets. These women have not been given their just due. Some of the items in the Gold Rush trash--the clothing, the milk glass cosmetic jars, the jewelry, the purse and jewelry--may have belonged to such women.

The Post-1900 deposits, created under different circumstances, picture a far different era. For those who still imbibed (the majority of Skagway's saloons had been taxed out of business and a new morality infected the community), beer and soda pop apparently replaced champagne as a favored drink. At least the patterning of the beverage container glass would lead us to believe so.

Despite efforts early in the century to raise enough local livestock and vegetables to supply the community, the great majority of the foodstuffs consumed in the community appear to have been imported from outside. Late in the deposits, we find the ubiquitious foil, cellophane, and plastic food wrappers which characterize the post-Depression food storage industry.

The majority of the ceramics from the Post-1900 deposits are undecorated, plain whitewares or porcelains. Sherds of inexpensive brown-glazed redware serving pieces are also included in the purchases of the city's residents, now about a third the number present during the Gold Rush.

Despite the medical advances of the twentieth century, by 1910 Skagway's residents may have needed their home remedies more than ever before, for as the city waned with the loosing fortunes of the Canadian mines, professional people such as doctors and dentists began to leave the community.

The household furnishings and personal items found near the Peniel Mission provide a few clues to its various occupants over the years since 1900. Children surely played in the yard, for there are toys and charms. Artifacts such as clothing scraps and fasteners, smoking accoutrements, jewelry, and writing materials were sparsely scattered throughout the strata. Unfortunately the common nature of most of the items prevents any sort of link, however tenuous, to the former occupants of the structure. The deposits suggest that personal articles belonging to men and to women were lost or discarded in the area, and that the assortment of household items is consistent with the upkeep of either a private residence or business such as Dr. Polly's office.

Structural Activities

It took only a few short months for the shabby tent city to blossom into a "real" town with stores and great hotels and wharves. The hardware and assorted nails, and structural materials such as brick, roofing felt, shaped wood, and window glass present in the Gold Rush deposits reflect the on-going construction activities occurring in the city before the turn of the century. A few items of glass and shaped wood retain traces of paint. This suggests a pride in the young city, in the need to make it not only the gateway to the north, but an attractive place to live. More importantly, painting also suggests a desire for permanence, for paint protects wood.

The remnants of kerosene lamps and electrical bulbs, of pipes and fittings, mirror the struggle to establish utility systems for the city. It also reminds one of the transitional nature of much of American technology during the latter part of the 1800s; water systems froze and kerosene lamps were still necessary because of the unpredictability of the electricity. The great quantities of coal combustion materials in the Gold Rush deposits underscore the dependency of the city upon outside supplies. Heating the large, drafty wooden buildings must have consumed vast amounts of fuel which had to be shipped in from some distance away.

Structural materials make up the largest component of the Post-1900 collection. Scraps of beaverboard, linoleum, wood, brick, glass and nails appear to have been tossed onto the ground near the Peniel during the 1937 remodeling project and probably during the demolition of the remaining Gold Rush period structures nearby.

Specialized Activities

A few military-related artifacts were recovered; these remind us of the period in early Skagway when more law and order than miner's courts were needed. The military played an important, if minor role, in Skagway's development. The number of cartridges found in the dump is somewhat surprising, but these too reflect the era, and the adventuresome nature of the trek northward. Other items, such as tools, are more prosaic. Obviously they represent the ongoing services provided in and by the small community. Communication was vital to Skagway, and the newspaper provided a link between the coast and the inland mining towns. The lead type, certainly from one of the city's several newspapers, illustrate this point.

SOCIO-ECONOMIC IMPLICATIONS

Alaska's early miners and frontiersmen were a self-sufficient lot who were able to wrest their shelter, their livelihood, and most of their subsistence from the hard land about them. They covered vast distances on foot, via dog sled, or canoe. Through their "blowouts" or sprees, they managed to accomplish a redistribution of wealth and maintain a sharing, egalitarian community.

With the massive influx of cheechackos into Alaska and Canada, all this changed. Communities like Skagway were almost entirely dependent upon the outside world for their food, building materials, clothing, and other subsistence items. Early in the Gold Rush, the transient population moved through the city in a steady stream, outfitting themselves, occupying boarding houses and hotel rooms, before moving on. These newcomers had little or no vested interest in the community, their goal was a great deal further north. Money from the newcomers, and later from the gold fields and from city businesses was fed into the economy, producing an economic boom that eventually affected not only Alaska and Canada, but the United States as well. The pursuit of wealth and status became the goal for many a Klondiker.

Several cultural processes were at work in Skagway. The process of urbanization and gentrification continued unabated from the fall of 1897 to after the turn of the century. Streets and roads were laid out, churches, schools, parks, and recreational facilities were built. Law and order prevailed and public officials were elected. Public services like water, sewers, telephones, electricity, and fire protection were organized. Businesses were enlarged and/or added.

Unlike many boom towns, Skagway was able to maintain a fairly strong economic position into the early years of the twentieth century. Skagway was fortuitously located. This community held a major position in the transportation network that linked the coastal ports of North America with the mineral-rich areas of the Canadian Yukon. Thousands of tons of goods were shuttled through Skagway over the White Pass Trail, the Brackett Toll Road, and finally the White Pass and Yukon Railroad to Yukon Territory.

The various transportation companies provided a primary economic base for the city. In Skagway, four large wharves extended from the city streets out to deep water to serve ocean going ships. A number of major transportation facilities were located in the city. These companies required offices, warehouses, machine shops, a railway depot and railroad hospital, as well as a private athletic club and a number of residences. Best of all, these companies offered steady employment.

Yet the fortunes of the city were linked inexplicably to the state of the Canadian and Alaskan mining community. As the mines closed, and competition for business grew stiffer, businesses in Skagway boarded up their windows and sold out. The railroad and tourism continued to support a much reduced business community into the third quarter of the twentieth century.

CHAPTER VIII. RECOMMENDATIONS

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Cultural Resources Management

Astute, sensitive management of the park's cultural resources must first begin with detailed knowledge of the resources and their significance. A great deal of work has already been done in Skagway but there are, as yet, many unanswered research questions pertinent to the management and preservation of these historic resources.

A proposed archeological assessment has made an excellent start on this problem. This document should facilitate the development of explicit research designs and documentation of the resources. In particular, additional archeological investigations done in relation to various construction projects should be preceded by a research design cognizant of the overall planning and resource documentation needs for this area.

If the park's resource management plan has not been updated recently, it should be revised to incorporate the recent findings. The National Register form for the Skagway historic district should also be revised to include work done not only at the Peniel Mission and the Moore Residences, but at some of the other structures in town.

We share this important historic resource with Canada. Coordination of the historical archeological work and other relevant studies, particularly in regard to the Chilkoot and White Pass Trails, can effectively increase resource preservation, and lay the ground work for enriched interpretation.

Upcoming restoration work on the Peniel Mission should be carefully designed to disturb the least possible ground surface. The project must be coordinated with the supervising archeologist throughout. It is likely that the 1937 foundation work and remodeling disturbed a significant area in the vicinity of the builder's trench around the perimeter of the Peniel.

Yet large expanses of the dump remain untouched beneath the structure. Given the size and nature of the sample recovered during the 1983 and 1985 excavations, it should not be necessary to expend the same level of technical excavation on the area proposed for disturbance.

However, a certain amount of additional work needs to be accomplished in the area. First, research should be done in the various city records and archival sources to document the whereabouts and dates of city utility lines. Previous National Park Service maintenance operations in the area should also be documented. Very little is known of the ownership, function, and specific locations of the Gold Rush era structures that once stood immediately west and south of the Peniel Mission. Further research could add to cur knowledge of these structures, and their role in Skagway's boom era.

Because of the amount of fill that has been added to the site, there is a distinct possibility that some of the old ground surfaces and features present during the Gold Rush are still intact in the vicinity of the Peniel Mission, outside the periphery of the creek bed and the dump. Some of the proposed construction activities have the potential to disturb these resources. Any areas ouside the Peniel that may be impacted by rehabilitation activities should be further tested to delineate more precisely: a) the extent of previous disturbance, b) the limits of area occupied by the dump, c) the location of any hitherto unknown features, including the location of the hip-roofed building and the sheds south of the Peniel, d) any differences in land use between the city lots number 2 and 3 (Block 24) and the adjacent Moore property just to the east.

Removal of soils in the impact area under the Peniel should be accomplished by an archeologist to facilitate the recording of important information on soil strata, unusual features, etc. Guidelines for the intensity of investigation and for the types of materials to be collected should be developed before work begins.

In addition, a detailed research design should be prepared to address specific research problems before any further excavation in the area is attempted. Research questions, such as the process of gentrification in Skagway, can only be addressed through careful consideration of the types of data that should be recovered during the salvage excavations. Data presented in this report are not conclusive, but suggest that further work on the bottle glass is one way to study conspicuous consumption. For instance, collection of only diagnostic parts of bottles may be sufficient for some studies, but may not be sufficient if one wants to test the hypothesis that glass color correlates with bottle function.

Other recommended studies include comparison of the Peniel Mission findings with dump deposits from pre-1898 occupations: 1) pre-Rush Dyea; 2) dump(s) used by people working for the Moores in 1896-1897;[1] 3) interior dump sites in Canada or in Eagle/Circle areas, from the time of the egalitarian prospectors. The last proposal would require coordination with Parks Canada projects, where material culture studies have not been emphasized in the past (e.g., Minni 1978; Burley and Ross 1979). Study of other types of artifacts might also work with a large collection. Ceramic studies might be useful in the salvage operations at the Peniel, as well as more detailed work with the glass. Research methods will have to be carefully weighed against time and funding constraints.

Interpretation

The findings at the Peniel Mission can be used to broaden our interpretation of Skagway's golden years. In the popular literature, the rowdy, lawless period of the town's past, which encompassed only the early part of the Gold Rush, is blown out of proportion. Focus upon the

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[1] The Moores did not drink so their dump might not provide good comparative information (Blee 1987).

Chilkoot and White Pass Trails also emphasizes the adventure and the danger inherent in the Rush. Integration of these stories into the larger framework of understanding illuminated by the findings at the Peniel Mission could make the story more historically accurate, and enrich and enliven its telling. It can also give us greater insight into the processes of the developing urbanization of America's latest frontier.

CHAPTER IX: ACKNOWLEDGEMENTS

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Patricia Lockeman uncomplainingly screened the large quantities of artifacts, and was always there when we needed a hand.

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APPENDIX A: ARTIFACT INVENTORIES

BEVERAGE STORAGE CLASS										
Type	Description	FILL	GOLD	MIXED	POST	STS	STS	F202 &	U-25D	TOTAL
			RUSH		1900	1983	1985	204	DIST.	BEVERAGE
Identifiable bottles										
bottle, glass	clear, brandy finish, Pacific								1	1
bottle, glass	aqua, soda water, crown								3	3
bottle, glass fgs	aqua, soda water, crown								37	37
bottle, glass fgs	black glass, case bottle		1							1
bottle, glass fgs.	brown, 3-piece mold								16	16
bottle, glass fgs	brown, bourbon, 'Davy Crockett'								14	14
bottle, glass fgs	brown, bourbon, Jesse Moore		6						1	7
bottle, glass fgs	brown, Van Schuyler								3	3
bottle, glass fgs.	colorless, Hires soda		5							5
bottle, glass fgs	colorless, Roger & Gallet				1					1
bottle, glass fgs	light green round-bottom soda								3	3
flask fgs	amethyst, flat		4							4
flask fgs	clear, brandy w/ring, shoe-fly		9						2	11
flask fgs	clear, flat		2							2
flask fgs	clear, Union Oval		35							35
Base sherds										0
bottle base/base fgs	black glass, turn mold?	1								1
bottle base/base fgs	brown	1			1				6	8
bottle base/base fgs	brown, cup-bottomed mold				2		1		2	5
bottle base/base fgs	brown, cup-bottomed mold, emb.					1				1
bottle base/base fgs	brown, embossed		3						5	8
bottle base/base fgs	brown, post-bottom mold		7		1					8
bottle base/base fgs	brown, post-bottom mold, emb.		2							2
bottle base/base fgs	brown, stippled				3	1				4
bottle base/base fgs	brown, turn mold		12		4		6		26	48
bottle base/base fgs	light green, kick-up								1	1
bottle base/base fgs	olive green, kick-up		61		3				37	101
bottle base/base fgs	olive green, turn mold	1	7				2		1	11
Finish sherds										0
bottle finish/finish fgs	amber, short brandy w/bead								1	1
bottle finish/finish fgs	aqua, brandy w/bead								1	1
bottle finish/finish fgs	aqua, brandy with sloping collar								5	5
bottle finish/finish fgs	bright breen, crown, machine md	1								1
bottle finish/finish fgs	brown, collar		1				3		9	13
bottle finish/finish fgs	brown, brandy tooled		1						1	2
bottle finish/finish fgs	brown, brandy tooled w/ring		1						1	2
bottle finish/finish fgs	brown, crown		7		1		1		9	18
bottle finish/finish fgs	clear, brandy with bead		1						2	3
bottle finish/finish fgs.	colorless, crown		6							6
bottle finish/finish fgs	light green, crown						1			1
bottle finish/finish fgs	olive green beer or soda		5				1			6

5/2

bottle finish/finish fgs	olive green wide collar								4	4
bottle finish/finish fgs	olive green wine/champagne appl		23		6		5		8	42
bottle finish/finish fgs	olive green, dble bead, twist neck								1	1
Body sherds										0
body sherds, glass	amber								75	75
body sherds, glass	amber embossed		2				1		6	9
body sherds, glass	black embossed				1					1
body sherds, glass	bright green	5			7				1	13
body sherds, glass	bright green, embossed				1					1
body sherds, glass	brown	51	706	10	166	14	103		860	1910
body sherds, glass	brown embossed	2	4		7	1	2		2	18
body sherds, glass	dark green	1				2				3
body sherds, glass	green		11	1	2					14
body sherds, glass	olive green	17	1758	12	227	8	89		1519	3630
body sherds, glass	olive green embossed		1		1					2
body sherds, stoneware	brown lead glazed		2		2					4
Closures										0
cork	tapered cylindrical						1		2	3
crown cap	ferrous plastisol lined Budweiser				1					1
crown cap	ferrous long skirt ca 3/8 inch		5							5
crown cap	ferrous short skirt, 1/4 inch	1								1
crown cap fgs	ferrous metal &/or cork	3	11						12	26
pop-top fgs	aluminum	1								1
screw cap	white metal impressed design		2						1	3
screw cap	ferrous metal/cork				1					1
seal	white metal, embossed bourbon	8	13						3	24
stopper	ferrous covered cork				1				1	2
										0
TOTAL BEVERAGE STORAGE CLASS		93	2714	23	439	27	216	0	2682	6194

APPENDIX A.2: FOOD STORAGE ARTIFACTS INVENTORY

FOOD STORAGE INVENTORY

Type	Description	FILL	GOLD RUSH	MIXED	POST 1900	STS 1983	STS 1985	F202 & 204	U-25D DIST.	TOTAL
condiment jar	colorless, mchn md, screw top				1					1
canning jar fgs	amethyst		1							1
canning jar fgs	aqua		27	1	3					31
canning jar fgs	aqua, Ball Mason		11							11
canning jar fgs	aqua, Mason		8							8
canning jar fgs	aqua, Mason's Patent		2							2
canning jar fgs	aqua, ground lip, topseal		3				1			4
canning jar	colorless glass		6			6				12
canning jar fgs	colorless, continuous thread								2	2
canning jar fgs	colorless, ground lip, topseal								1	1
cans, ferrous fgs	ferrous, flat	144	5411	49	227	160	678	10	1471	8150
cans, ferrous fgs	ferrous, round external lapped		7							7
cans, ferrous fgs	round, measurable diameter		5		1	2				8
cans, ferrous fgs	square/rect. external lapped		1							1
condiment jar fgs	aqua, Lea & Perrins		22							22
condiment jar fgs	aqua, laid-on oil finish		14							14
condiment jar fgs	aqua, screw top, ground lip		1							1
condiment jar fgs	colorless, laid-on packer		27							27
condiment jar fgs	colorless, embossed						1			1
condiment jar fgs	colorless, machine md, screw top				2					2
condiment jar fgs	colorless, molded, Heinz		19							19
condiment jar fgs	colorless, push-on lid				4					4
condiment jar fgs	colorless, screw top, no shldr.								1	1
condiment jar fgs	light amber, embossed						19			19
container fgs	plastic, orange gum	3								3
extract bottle fgs	colorless, oval, panelled		19							19
jelly jar fgs	colorless, molded ribbing		10							10
jelly jar fgs	colorless, plain rim		1		1					2
jelly jar fgs	colorless, incised rim		2							2
marmalade jar fgs	whiteware, maker's mark		27							27
marmalade jar fgs	hard whiteware		13							13
milk bottle fgs	amethyst, lip								1	1
milk bottle fgs	colorless glass		2						4	6
pickle jar fgs	colorless, hexagonal								2	2
preserve jar fgs	colorless base, embossed		8						1	9
bottle base fgs	amethyst, embossed								4	4
bottle base fgs	amethyst, plain		2		1					3
bottle base fgs	aqua, embossed		4						10	14
bottle base fgs	aqua, plain		19						16	35
bottle base fgs	colorless, embossed								3	3
bottle base fgs	colorless, machine md, embssd				1					1
bottle base fgs	colorless, plain		21		4				9	34
bottle base fgs	colorless, rectilinear		1	1						2
bottle base fgs	lt blue								1	1
bottle base fgs	lt green, embossed		1						7	8
bottle base fgs	lt green, cup mold								1	1
bottle finish fgs	amethyst	1								1
bottle finish fgs	aqua		1							1
bottle finish fgs	aqua, brandy w/bead		1							1
bottle finish fgs	aqua, ground rim, screw top								1	1
bottle finish fgs	aqua, oil/collar		7		1				2	10

FOOD STORAGE INVENTORY

Type	Description	FILL	GOLD RUSH	MIXED	POST 1900	STS 1983	STS 1985	F202 & 204	U-25D DIST.	TOTAL
bottle finish fgs	colorless		3						1	4
bottle finish fgs	colorless, brandy w/bead				1					1
bottle finish fgs	colorless, club sauce		1							1
bottle finish fgs	colorless, extract lip								1	1
bottle finish fgs	colorless, oil collar		3							3
bottle finish fgs	colorless, packer		2		1		1		1	5
bottle finish fgs	colorless, packer w/bead		1							1
bottle finish fgs	colorless, screw top		12	1					1	14
bottle finish fgs	colorless, short brandy w/bead								1	1
bottle finish fgs	lt green		1							1
bottle neck	colorless, plain				1					1
sherds, body	amethyst, embossed				1				1	2
sherds, body	amethyst, plain	6	4	6	7		6	1	8	38
sherds, body	aqua, embossed		5		1				3	9
sherds, body	aqua, plain	36	742	15	92	3	61		435	1384
sherds, body	colorless, angular shaped				3				2	5
sherds, body	colorless, embossed	4	40	1	1		1		6	53
sherds, body	colorless, molded curvilinear		2		1		2			5
sherds, body	colorless, plain	85	856	45	188	24	76	2	184	1460
sherds, body	colorless, ribbed		4							4
sherds, body	colorless, stippled				3					3
sherds, body	lt green, plain		2	1	2				81	86
										0
can bail	ferrous wire, lard can size		1							1
canning access	total									0
lid	amethyst, plain		1		1				2	4
lid	colorless, embossed		4						1	5
lid fgs	colorless, embossed		2							2
lid	colorless, plain				1					1
lid liner	cork, 3/16 in diameter		4							4
lid	ferrous screw-top			1	1					2
lid liner fgs	milk glass canning	1								1
lid liner	milk glass canning		1			1				2
lid fgs	zinc internal threaded			1					2	3
lid & liner	zinc/embossed milkglass		2							2
cork	cork		1							1
roll key	ferrous								1	1
roll key w/strp	ferrous		4				1		2	7
wrappings	aluminum foil	12			17	5	2			36
wrappings	aluminum foil & plastic	1								1
wrappings	aluminum foil, gold coated	2								2
wrappings	aluminum foil, paper lined	7			1					8
wrappings	cellophane	1			5	1				7
wrappings	cellophane cheese wrapper					1				1
wrappings	plastic	2			2	1				5
wrappings	plastic pull strip	1								1
										0
TOTAL		306	7402	122	576	204	849	13	2270	11742

APPENDIX A.3: LIST OF FAUNA

- Class Pelecypoda
  - Clam (shell frag.)
  - Oyster (shell frag.)
- Class Pisces
  - (Fish (vertebrae)
- Class Aves
  - Order Anseriformes
    - Duck sp.
  - Order Galliformes
    - Family Tetraonidae
      - of Dendragapus obscurus - Blue Grouse
      - Group sp.
    - Family Meleagridae
      - Meleagris gallopavo - Turkey
  - Indet. small birds
  - Indet. Birds
- Class Mammalia
  - Order Lagomorpha
    - Family Leporidae
      - Lepus americanus - Snowshoe Hare
  - Order Rodentia
    - Family Castoridae
      - of Castor canadensis - Beaver
    - Family Cricetidae
      - Microtus sp. - Vole
  - Order Carnivora
    - Family Ursidae
      - Ursus americanus - Black Bear
    - Family Felidae
      - Felis cattus - Domestic Cat
  - Order Artiodactyla
    - Family Suidae
      - Sus scrofa - Domestic Pig
    - Family Cervidae
      - Odocoileus hemionus - Mule Deer
      - cf Cervus elaphus - Wapiti
    - Family Bovidae
      - Ovis aries - Domestic Sheep
      - Bos taurus - Domestic Cattle, Oxen
    - Indet. Artiodactyls
  - Indet. Medium-sized Mammal*
  - Indet. Large Mammal**

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*Medium mammal = Snowshoe rabbit, fox, lynx, wolverine, domestic sheep, beaver, marmot, porcupine

**Large mammal = Deer, wapiti, moose, bighorn sheep, mountain goat, pig, cattle, oxen, bear, cougar, seals, whales

APPENDIX A.4: FOOD SERVING ARTIFACTS INVENTORY

FOOD SERVING CLASS										
Type	Description	FILL	GOLD RUSH	MIXED	POST 1900	STS 1983	STS 1985	F202 & 204	U25-D DIST.	TOTAL SERVING
glass, amethyst, pressed	body sherds								14	14
glass, colorless	tumbler, rim/base fgs		3				1	2	5	11
glass, colorless pressed	body sherds		24	4	2	3	15		26	74
glass, colorless, cut	body sherds				1					1
glass, colorless, etched floral	body sherds						3		1	4
glass, colorless, pressed	stemmed goblet		4							4
glass, colorless, pressed	tumbler, partial	5	5				1			11
										0
earthenware spall	body sherds		2			1				3
earthenware, cream body, brown glaze	body sherds		4				1			5
earthenware, pink body and glaze, gilt trim	body sherds	4								4
										0
ironstone	plate, partial		1			1				2
ironstone, mold decorated	rim sherds		1							1
ironstone, mold decorated + polychrome decal	rim sherds		1							1
ironstone, mold decorated, floral	rim sherds		2							2
ironstone, undecorated	base sherds		5							5
ironstone, undecorated	body sherds	8	98		2		4		17	129
ironstone, undecorated, maker's mark	saucer, partial		2							2
										0
porcelain, black handpainted	body sherds								1	1
porcelain, black handpainted in incised dec	body sherds				1					1
porcelain, gilt banded	cup, partial		2							2
porcelain, gold luster band	body sherds		1							1
porcelain, gold spackle	body sherds		1							1
porcelain, green UG banding	body sherds				1	1				2
porcelain, green UG handpainted	body sherds		1							1
porcelain, handpainted OG on pink glaze	saucer, partial								1	1
porcelain, mold decorated	body sherds					1			1	2
porcelain, mold decorated, gold luster trim	body sherds				1					1
porcelain, OG blue & peach luster	body sherds					1				1
porcelain, polychrome handpainted OG/UG Chine	tea cup, partial			1						1
porcelain, polychrome OG decal	body sherds	4	5						3	12
porcelain, polychrome OG handpainted	body sherds		1	1					4	6
porcelain, polychrome OG/UG handpainted Chine	base sherds								1	1
porcelain, polychrome OG/UG handpainted Chine	body sherds	1	4						5	10
porcelain, polychrome OG/UG handpainted Chine	rim sherds		3						1	4
porcelain, polychrome UG decal	body sherds	1	1							2
porcelain, polychrome UG handpainted	rim sherds		1							1
porcelain, red/pink OG hand painted	cup/bowl base				1					1
porcelain, undecorated	body sherds	2	8		5	1	2		3	21
porcelain, undecorated	tea cup, fragments				2					2
										0
redware, brown glazed	body sherds			3						3
redware, brown glazed, OG handpainted	body sherds	3							4	7
										0
stoneware, pink body and glaze	body sherds				1					1
										0
whiteware, black transferware	body sherds		10							10
whiteware, black transferware	base sherds, mkr's mrk		2							2
whiteware, black transferware	rim sherds			2						2
whiteware, blue floral transferware	base sherds				1					1
whiteware, blue floral transferware	rim sherds		1							1
whiteware, blue floral transferware	body sherds	9	34	2	5				10	60

FOOD SERVING CLASS										
Type	Description	FILL	GOLD	MIXED	POST	STS	STS	F202 &	U25-D	TOTAL
			RUSH		1900	1983	1985	204	DIST.	SERVING
whiteware, blue floral transferware	body sherds									0
whiteware, blue UG decoration, type undetermin	body sherds		1	1						2
whiteware, brown OG decal, gilt trim	body sherds		4							4
whiteware, brown transferprint floral/geometr	saucer, partial		16							16
whiteware, brown transferware	body sherds		35				32		14	81
whiteware, flow blue	body sherds				2					2
whiteware, gilt OG trim	handle sherds	3		1					5	9
whiteware, gilt OG trim	rim sherds	2	6						1	9
whiteware, gilt OG trim, spackle	body sherds		2						7	9
whiteware, mold decorated	saucer rim		7							7
whiteware, pink glaze on exterior	body sherds				1					1
whiteware, polychrome OG decal	body sherds		7					1	7	15
whiteware, polychrome OG decal, gilt handpaint	body sherds		7							7
whiteware, polychrome OG handpainted	body sherds								1	1
whiteware, polychrome UG decal	body sherds		2	2	1				6	11
whiteware, polychrome UG handpainted	body sherds		2		1			1		4
whiteware, polychrome, _G floral decal exterio	tea cup fragments		1							1
whiteware, tan UG trim	rim sherds		1						1	2
whiteware, undecorated	cup handle				2					2
whiteware, undecorated	cup fragments		14				3			17
whiteware, undecorated	plate fragments		11							11
whiteware, undecorated	saucer base		2							2
whiteware, undecorated	body sherds	43	404	26	41	3	95	18	140	770
whiteware, undecorated	curved vessel base		20		1		4			25
whiteware, undecorated	curved vessel rim		5	1	6		11		1	24
whiteware, undecorated	curved vessel handle/ft		1		2					3
whiteware, undecorated	curved vessel base, mkr	4	7		1		3		2	17
whiteware, undecorated	flat vessel base		6	2			1		14	23
whiteware, undecorated	flat vessel base/rim		18		3					21
whiteware, undecorated	flat vessel rim		24	1	7			1	31	64
whiteware, undecorated	rim sherds, unknown		3	4						7
										0
yellowware, undecorated	body sherds	1	1						1	3
										0
ferrous metal flatware	spoon, fork (partial)		2		1					3
ferrous metal	pan/plate		2							
(OG=overglaze UG=underglaze)										0
TOTAL		90	838	51	92	12	176	23	328	1610

PERSONAL GROUP										
		FILL	GOLD	MIXED	POST	STS	STS	UNIT 25D	F202 &	TOTAL
Type	Description		RUSH		1900	1983	1985	DIST.	204	
Clothing-Fasteners										
buckle	ferrous		1							1
buckle	yellow metal prong							1		1
buckle	yellow metal		1							1
button	bone 2-hole sew-thru		1							1
button	ceramic, Prosser, white 4-hole	1	2		1			1		5
button	ceramic collar/cuff stud		2		2					4
button	ferrous & yellow metal 2-piece							1		1
button	ferrous	2			2					4
button	ferrous and white metal		1							1
button	ferrous, fabric covered		1							1
button	glass conical decorated face		1							1
button	plastic white 2-hole sew-thru				1					1
button	plastic 1-piece red sew-thru				1					1
button	shell sew-thru no. holes unknown		1							1
button	shell 2-hole sew-thru	1	2							3
button	shell 4-hole sew-thru		2							2
button	white metal 1-piece 4-hole		1							1
button	white metal 2-piece, star dec.		1							1
button	yellow metal		1					2		3
fastener, strap/buckle	yellow metal		4		1		1			6
garter	ferrous		2							2
garter	rubber, round white button				1					1
hook/eye	ferrous		4							4
hook/eye	yellow metal		4							4
pin, safety	yellow metal		2							2
sanitary belt	white metal oval riveted		1							1
snap	yellow metal		4			1				5
suspender	ferrous		7					2		9
suspender buckle	yellow metal "Crown Make"			1						1
Clothing Parts										0
collar stay	yellow transparent celluloid	1								1
fabric	wool, black coarse weave						3			3
fabric	wool, brown coarse weave		1							1
fabric	wool, black felt-like		1							1
fabric	silk, black fine weave		2		1					3
fabric	tan coarse weave coated		12							12
fabric	synthetic, tan open weave				3					3
fabric	wool, black fine weave		1							1
yarn	wool, red	3								3
Clothing-Footwear										0
overshoe	rubber/fabric, black, overshoe		2							2

overshoe fgs	rubberized black fabric		7			1		10		18
shoe	leather man's right, black, hi-top		1							1
shoe	leather, man's brown 9-1/2		1							1
shoe eyelet	white metal							1		1
shoe eyelet	yellow metal		2					1		3
shoe fragments	leather, woman's left		1							1
shoe fragments	leather/wood heel, woman/child		3							3
shoe fragments	leather, brown insole						2			2
shoe fragments	leather, brown		15					1		16
Clothing-Accessories										0
handbag parts	ferrous frame, black fabric		1							1
knife sheath	leather, machine stitched				1					1
umbrella parts	ferrous spokes, black twill fabric		8							8
Clothing Making/Repair										0
straight pin	ferrous flat stamped head		1							1
straight pin	yellow metal		2			1				3
Grooming & Hygiene										0
bandaging	gauze & bandaids	1								1
comb	yellow plastic toothed				1					1
cosmetic jar fgs.	milk glass body and rims	3	7		4		2	14		30
fingernail	plastic red artificial	1								1
hair curler pin	pink plastic				1					1
hair pin	metal 'bobby pin'				1					1
lipstick case	gilded ferrous red lipstick				1					1
lipstick tube	yellow metal				1	1				2
toothbrush	bone handle 3-row		1							1
toothbrush fgs.	bone, head only, 4-row		3							3
Vasaline jar fgs.	colorless, embossed		22							22
Money										0
copper-clad penny	1979 penny	1								1
Personal Ornamentation										0
beads	plastic, assorted colors	1			3					4
bracelet? fgs.	white metal, floral design		4							4
broach or locket pt	ferrous, oval		1							1
emblem	American Legion Auxil.	1								1
necklace pendant	gilded white metal, purple glass	1								1
pin, hat or stick	ferrous & white metal		1							1
pin, hat or stick	glass & white metal stimul. pearl		1							1
pin, hat or stick	white metal with eagle		1							1
										0
TOTAL		17	148	1	26	4	8	34	0	238

UNCLASSIFIED GROUP - INVENTORY										
Type	Description	FILL	GOLD RUSH	MIXED	POST 1900	STS 1983	STS 1985	UNIT25-D DIST.	F202& 204	TOTAL
CHANGED										
ceramic	burned		2	3	5	1	1	1		13
	burned whiteware			3						3
	burned blue transferprint ww		1							1
chalk?	burned		2							2
charcoal	fragments		24	2	9	23	3	9	2	72
combustion product	conglom burned constr mtrls		15							15
ferrous	lumps	89	374	33	209	58	88	137	3	991
glass htd/mltd	amethyst, pressed linear dec			1	1					2
	aqua		14	1				7		22
	dark blue/green					1	7			8
	brown, crazed					1		2		3
	colorless	7	110	20	20	9	5	35		206
	green		5					2		7
	olive green		1					3		4
	white, milk glass	1	4					1		6
glass wtr worn	clear, dulled		2							2
organic material	black/burned/decomposed						8			8
plastic, molten	white				1					1
stone	crushed gravels	11	2		2		13	12		40
	fire blackened					1				1
	red-stained/painted granite							1		1
white metal	flat, melted					1				1
wood	charred		18		4	2		1		25
UNKNOWN										0
ferrous	bar		1		1					2
	disc, corroded	1			1					2
	heavy biplanar form		2							2
	thick sheet/strip	3	5		3					11
	thin sheet/strip			2		2				4
fibers	amorphous grey/beige		15		3					18
	matted felt-like organic		12	1	183	5		2	3	206
glass	heavy yellow		17			17		4		38
	black, round, function unk.				1					1
gum-like	white, amorphous				1					1
lead	fragments		1							1
leather	asstd. strips/fgs	2	3							5
milk glass	flat, w/black material adhering	5			48	1	1			55
nylon filament	white						1			1
plastic	asstd colors, types, flex/nonfl	18		1	15	1	2	1		38
rubber	green plastic over green rubber						1			1
	white, ribbed							1		1

string	green, fine		1							1
unknown	cylindrical, grey		2							2
	hard grey		10				6			16
	powdery white lumps							1136		1136
	powdery pink material							3		3
wax-like	lumps				28					28
white metal	flat sheet/strip		13	1	1		3	1		19
yellow metal	cylindrical		1							1
	curved flat sheet & fgs		5							5
	flat sheet		3					3		6
WHATSIT										0
band	yellow metal		1							1
bracket w/ screw	ferrous		1							1
bar	carbon or graphite, fine rect.		1		1					2
clamp/rivet	non-ferrous				1					1
composition	black, flat		10		10	4				24
conical item	ferrous, hollow						1			1
circular object	yellow metal							1		1
curvilinear object	white metal		2					1		3
cylinder	tan paper						3			3
disc	ferrous	1	1		1					3
	ferrous (steel) w/attachment	1	1							2
fitting	yellow metal		2							2
	ferrous		1							1
flange	cuprous flange/washer		1							1
	white metal		2							2
fluted object	clear glass body sherd		2							2
	thin cuprous							7		7
knob?	glass w/painted coating							1		1
lipped rect. object	ferrous item		1							1
metal loop	wh mtl attchmt holes ptd black		1							1
multi-component	ferrous			1				2		3
partial wire rings	ferrous		7							7
rattail object	unknown metal		1							1
riveted wedge	ferrous		1							1
rod	ferrous, slim dble pointed				1					1
round object	cuprous		1					1		2
sheets	celluloid				2					2
spherical object	paper lined w/ projections		1							1
tube	fe. flared hollow tube		1							1
tube/spring	white metal		1							1
										0
TOTAL		139	705	69	552	127	143	1375	8	3118

APPENDIX B: DESCRIPTION OF FEATURES

Feature 46, test trench 21-B: This feature is a shallow hole bisected by the west side of test trench 21, 1.5 feet south of the north line, along the west trench line. The feature measured 1 foot north/south by 0.4 foot east/west, and extended from .5' below existing grade to 1.05 below existing grade. The feature was first encountered in stratum C and could be traced into stratum D. It contained fill mixed with red/grey cinders from lower strata.

Feature 47, test trench 21-D: First encountered in stratum C, this narrow trench extended below the end of the excavation. The top was from .60 to .63 foot below existing grade; it extended down at least to 1.4' below existing grade. This feature contained generalized brown mottled fill; the very loose soils contained sand, pebbles, and silt.

Feature 200, unit 25-A, N5W10: Uneven somewhat discontinuous lens of humus at the interface between stratum A and stratum B. Depths ranged from between 0.05 to 0.14 foot below existing ground surface; lens was about 0.05 foot thick. Contained modern construction debris. Was probably a thin layer of grass or leaves.

Feature 201, unit 25-A, N5W10: Assemblage of artifacts, including a pick-axe head, long straight-sided screw top bottle (of fairly recent manufacture, ca. 1930-), felt-like building paper with cardboard backing, pieces of brick. Spread across most of the southwest quadrant of the unit at the mid-point of stratum C. Depths ranged from 0.96 to 1.60 below existing grade.

Feature 203, unit 25-A, N5W10: When a lens of coarse, compacted combustion products and artifacts was first found in this unit, it was designated as feature 203. Once it became evident that it was part of a stratum, the feature designation was omitted.

Feature 205, unit 25-B (N15W20): A round charcoal stain 0.65 foot in diameter found in stratum E in the central portion of the unit. The 0.16 foot deep feature extended from 0.86 to 1.02 below grade.

Feature 206, unit 25-B (N15W20): A thin sandy loam lens encountered midway through stratum E along the north wall of unit 25-B.

Feature 209, unit 25-D, N25W30: Rotted, pithy wood fragments in a squared, linear pattern measured about 2.4 foot north-south, 3 foot east-west, and approximately 0.2 foot thick. The feature, found in stratum B, was heavily overgrown by tree roots up to 0.2 foot in diameter. The south end entered the wall at 0.72 foot below existing grade; the north end of the feature was 0.85 foot below existing grade.

APPENDIX C: HISTORICAL BACKGROUND: THE ARMY IN SKAGWAY

This section will describe the various structures leased by the Army during their stay in Skagway, and will include information on some of the military activities that may have a bearing on future remains found in archeological investigations in Block 24 where the Astoria Hotel was once situated.

On September 15, 1899, the troops of Company L of the 24th Infantry moved from their temporary tent shelters on the Moore property into the Astoria Hotel. The Astoria, a two-story 25- by 100-foot structure with a 12- by 16-foot rear extension, was situated at 236 Sixth Avenue just off Broadway, a little over 100 feet directly west of the present location of the Peniel Mission. It was built some time between late January and April, 1898 (Figures 3.1 and 3.2). Figure 3.4 shows the men of Company L in front of the corrugated iron-clad Astoria (Building A). The hipped roof building at the far left has been designated building D in later photographs; its function is unknown, but it may have been one of the structures later leased by the infantry as barracks for the soldiers. The function and ownership of the small structure shown in Figure 3.6 immediately behind the Astoria are also unknown. According to 1898 newspaper advertisements, the Astoria was:

> the Largest and Best Furnished Hotel in Alaska, [with] Steam Heat, Electric Light, Electric Call Bells, Bath Rooms, Hot and Cold Water, The Only Family Hotel in the City. Firstclass Bar in connection; (Skagway News, 26 August 1898:1).

By 1899, the Astoria advertising had become somewhat more sophisticated; the "Finest Hotel in Alaska" had "Elegantly Furnished . . . . Steam Heated, Electric Lighted" rooms on the "European Plan . . . . Rates: From $1 upwards" along with a "First-Class Bar and Club Rooms" (Daily Alaskan, 24 March 1899:1). Although the hotel would later prove to be inadequate for use as a barracks, the soldiers must have found it luxurious when compared to the tents they had occupied after the fire. The Chief Quartermaster of the Department of the Columbia described the Astoria as:

> well constructed. . . . The upper floors piped for steam which if completed by the addition of a smaller boiler would make the building the most comfortable in the city giving ample and fit accommodation for his [Hovey's] company temporarily (Jacobs 1899).

Quartermaster Jacobs's correspondence also indicates that the $175 rent for the structure was:

> exclusive of steam boilers and such other slight repairs to make them fit for occupancy by troops which Capt. Hovey estimates will not exceed one hundred fifty dollars. . . . (Jacobs 1899).

These "slight repairs" included connection of the Astoria to the city water mains, and installation of plumbing and bathtubs. Within a few days the Quartermaster General had approved $150 for "necessary additions or repairs" to the Astoria (QMG 1899a). There was no plumbing in the hotel, so a

> dry earth closet was built on, and is in use, but has to be emptied daily by a scavenger. There are as yet no sewer connections in town, altho' a sewer is practicable. . . . (Hovey 1899b).[1]

Monies were authorized sometime during 1900 to install a new water system in the "present barracks," presumably the Astoria Hotel (Hovey 1900c). Hovey also requested emergency funding for

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[1] The dry earth closet may be the shadowy structure shown behind the kitchen (building B) in Figure 3.1.

> sewer purposes, and . . . for repairing the fire plug and pipe leading there from to the main. The problem of disposing of soiled water has been a very serious one. First I tried cess-pools. These backed up during the high tides and became useless. Then there being no other means of disposing of it, and the necessity being immediate, I laid a two inch drain pipe 225 feet long [sic] a neighboring creek, this in its turn became useless, but it was the only thing then available. I was then able to get hold of some four inch tiling which was then laid in and has up to the present time done the work satisfactorily. When the two inch pipe was taken up it was found that the water had backed up, filled in under the old kitchen, part of the barracks, to the extent which would have in a short time have caused considerable sickness. If this present water and drainage system does not fill the bill then nothing more than can be done where we are now situated, and I therefore urge upon you the necessity of the above mentioned expenditure, in the hope of its success (Hovey 1900c).

The Astoria lease also included two small gable-roofed wooden buildings behind the hotel; one measuring 14-feet by 16-feet in size, and the other 10- by 24-feet (Buildings B and C; Figure 3.1). The army wasted no time in converting these structures into a kitchen and coal shed respectively. It is not entirely clear from the photographs which was the kitchen and which was the coal shed. However, judging by the size of the structures in Figure 3.1, the longer narrower structure, Building C, was probably the coal shed.

Captain Hovey reported that the Army was "allowed the use of a large unused room in the Astoria Hotel for subsistence supplies" (Hovey 1899b).[2] For an additional $80 a month, the army was able to rent a building from P.W. Snyder. Mr. Snyder

> fixed up offices, and also rooms for storing the liquid subsistence stores, and vegetables, which freeze so easily

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[2] The Astoria lease was renewed until June 30, 1903. The hotel and the two outbuildings were rented for $175 from A.H. Davis (Jenks and Davis 1901).

> during the winds that blow here in cold weather. This was occupied by us Nov. 1st . . . (Hovey 1899b).[3]

Several small cabins adjacent to the officers' quarters were used as storehouses (see buildings G, H, and N, Figure 3.7 et seq.). These separated facilities allowed division of supplies in case of fire, a constant source of worry to Captain Hovey. Although the volunteer fire department did good work in saving property, and "had two hose carts and a hook and ladder truck . . ." Hovey was concerned that "some day when the elements are against it, the town, or much of it must go." The commander took several active measures to protect the men and property from fire (Hovey 1899b). He placed fire buckets and water barrels in all buildings leased by the Government, and acquired 200 foot of canvas-lined rubber hose, a nozzle, and assorted couplings to hook onto the regular town fire hydrants, "in case our own fire plugs failed to work" (Hovey 1899a). Active in civic affairs, Hovey also volunteered the services of his troops to the City Council as fire fighters, for Skagway was surely "in danger of being swept by a conflagration" (Daily Alaskan 1 January 1899:14; 21 February 1913:n.p.).

In addition four telephones "attached to the general city circuit" were installed--one at "Capt. Hovey's office, one at the barracks, one at headquarters, and one at the post hospital" for use "in calling the men in case of fire as well as at other times" (Daily Alaskan 14 January 1900:4).

By July, 1900, new leases had been signed for a stable, several storehouses, the hospital, several sets of officers' quarters and two barracks. The old railroad hospital on the next block was renovated and rented for $35 a month as the post infirmary. The seven room hospital was used for quarters as well as an infirmary (Hovey 1899b; Jenks and Pacific Arctic Railway 1900). Leases with P.W. Snyder for Quartermaster and Commissary Storehouses again in October, 1901; rental was $80 per month. The property was described as "one frame building for storehouse for purpose of storing Quartermaster's supplies and Subsistence Stores, situate [sic] on 6th Avenue, west of State Street" (Jenks and Snyder 1901b).

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[3] This building, "about 350 yards and two blocks from the barracks," was occupied during the night by one soldier (Bearss 1970:177). Military patrols also visited the area at 20-minute intervals through the night. Originally two buildings were leased from Snyder; one for storehouse of Quartermaster supplies, and one for officer's quarters (QMG 1900a). Hovey was concerned over the lack of substantial buildings for military use; because the land lacked title and had not been patented, none were being built.

Another lease was drawn with Frank Lowe for additional barracks to house troops recently brought in from Fort Wrangel. The lease stipulated that this structure was "one frame building for barrack purposes, situate [sic] on 6th avenue, East of Broadway, Skagway, Alaska" (Jenks and Lowe 1900). This building may have been one of the structures (Buildings D, F, or I) directly east of the Astoria on the south side of Sixth Street.

A variety of living arrangements were made for the officers.[4] On November 1st, 1899, a "double set of officers' quarters" was leased for $50.00 per month from P.W. Snyder. The lease describes these quarters as "one frame building for officers quarters situated on 6th Avenue, east of Broadway, Skagway, Alaska" (Hovey and Snyder 1899). However, it was found that the building was "not adaptive as a residence for two married officers" (2nd Lieut. E.L. Rains, 24th Inf., and Cont. Surgeon E. Bailey, U.S.A.), so in September, 1901, two single cottages were leased from Mr. Snyder for $24.00 each (Jenks 1901d). The two separate leases were each described as "One . . . frame building for Officers' Quarters situate [sic] on 6th avenue, east of Broadway. . . ." (Jenks and Snyder 1901a).[5] This suggests that at least one of the small houses originally rented in the fall of 1899 for storage may have been put into use as officers' quarters, and the stores were now housed in another of Snyder's buildings some blocks away west of Broadway.

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[4] Quarters on 4th Avenue east of Broadway were also leased from John Hislop for 1st Lieut. I.C. Jenks, 24th Infantry, recently transferred from Wrangel (Hovey 1900a; Hovey and Hislop 1900). Later arrangements included: a lease with W.G. Stokes in September, 1901, for "one room as quarters for Signal Sargeant, U.S.A. situate [sic] in the City of Skagway . . . for the sum of $12.00 per month; and (Jacobs 1901). "___rooms in hotel, officers' quarters @ $30.00 per, Jno. J. [McG?]illicuddy (Jenks 1901a).

A different set of rooms were rented for Captain Jenks, the new Quartermaster at Skagway in August, 1901, after he complained about the building rented from John Hislop for $20.00 per month.

> [The 4th Avenue structure] used by me is dilapidated, draughty, leaky and almost beyond repair. During high tide water surrounds the house, making it damp and unhealthy. Under existing conditions the dwelling is entirely unfit for winter occupancy in this northern latitude (Jenks 1901b).

Jenks' new quarters were "one (1) frame building for officer's quarters, situate [sic] on 2nd Avenue, west of Main Street. . . ." leased from J.W. Winslow for $34 per month (Jenks and Winslow, 1901).

In addition to men and stores, the infantry had to find space for their teams and wagons. We know that they were in possession of at least one mule team in 1899. In the estimate of Quartermaster's Supplies for the quarter ending on 30 June 1900, Captain Hovey listed 1 Captain, 1 A.A. Surgeon, 65 men, 2 mules, and 1 wagon present. Additional harness and four-mule wagon was shipped to Skagway July 2, 1900 (QMG 1900c). A news item in the September 6, 1899 Daily Alaskan notes that "Captain Hovey has donated the use of a fine mule team" to assist in the gravelling of Fifth Avenue for 200 feet east of Broadway. At first the team was stabled in a hired room near the barracks at a cost of $6 a month. However, this soon became "annoying and detrimental to the service" since "animals belonging to civilians were often stabled in the same building." A stable and a shed of "sufficient dimensions to house the wagons, sleighs, [forage,] water tank and light spring wagon" were rented from J. Bernard Moore (Jenks 1900). These buildings were located east of Broadway near the bluff (Jenks and Moore 1901). Later correspondence indicates that the mules were "watered from a creek near by into which several sewerage drains empty, causing the water to become foul and unfit for any purpose." Connection to the city water was sought as a remedy for this unhealthy situation (Chappelear 1902).

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[5] In November, 1900, an expenditure of approximately $75.00 was authorized to supply two bathtubs for the Officers' Quarters (QMG 28 November, 1900).

Additional means of transportation were requested in May, 1900; Captain Hovey wanted more mules and harness, a light spring wagon with 2 seats, a dump cart, a 2 seat passenger sleigh, and a water wagon "suitable for carrying water from spring to barracks, with attachment for sprinkling roads. Capacity about 600 gallons."[6] Endorsements indicate these items were shipped to Skagway.

Late in 1900, a new U.S. Army barracks was built across the street north of the Astoria Hotel about fifty feet east of the Elks Hall to provide extra housing for the troops (building R, Figure 3.13). The building was supposed to have a new kitchen, a water supply, and unfreezable fire protection. Some of the troops of the 24th Infantry moved into the building on November 5, 1900; the rest remained in the Astoria.[7] Evidently the building was not completed to the satisfaction of the Army, because Captain Jenks requested an expenditure of $400.00 in September, 1901 to install water-pipes in barracks leased from P.W. Snyder in the fall of 1900:

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[6] This is an estimate of Quartermaster's Supplies during the quarter ending on the 30th day of September, 1900. By this time there were 3 officers and 109 men, 2 mules, and 1 wagon on the post.

[7] The new frame 2-story barracks building measuring 35' by 170' in size was leased from P.W. Snyder for $275 per month (Daily Alaskan 3 October 1900:16; Ibid. November 1900:1; Jenks 1901a).

> This amount to include all labor and material. Water-pipes have never been laid in this building; the men are compelled to cross over to barracks [the Astoria?] on opposite side of the street to the wash-room, which is very trying on men getting out of bed and going out in the cold in winter (Jenks 1901c).

The new water system was intended to operate much like the one already installed in the Astoria. That is, the system in the Astoria had been constructed with 2-inch water pipes laid beside a ½-inch steam pipes. In case of freeze-up, a "steam-thawer" was attached to the smaller pipe and live steam driven through to thaw the larger pipe. Captain Jenks also requested $50.00 for "overhauling water system in barracks already supplied with water" as a precaution against the coming winter freeze (Jenks 1901c).

By this time the Army had a number of structures in the Skagway area under lease. Offices, hospital, stables, bakery, and living quarters for the men and officers were scattered among different structures, as were the Quartermaster stores which were housed in at least four separate buildings The lease signed by Captain Hovey and Frank Bishoprick, March 1, 1902, was for "one frame building for storehouse . . . situate [sic] on 3rd Avenue, east of Broadway. . . ." The building had been rented as a storehouse for sometime under informal contract. Two structures were leased from Snyder for hospital purposes, and others from Mrs. Leslie Butler for Signal Sergeant. (Hovey and Bishoprick 1902). These leased buildings were in different parts of Skagway, complicating supply, communications and sentry duty. Most of these frame structures had been hastily erected during the early days of the Gold Rush and were generally in poor condition.

Six months later in a letter to the Chief Quartermaster of the Department of the Columbia, Captain Jenks requested that leases for a number of structures occupied by the 24th Infantry not be renewed.

This list also included the building used as officer's quarters (leased from the estate of John Hislop), the hospital (leased from Pacific and Arctic Railway & Navigation Company), the "building now in use as double set officer's quarters" owned by P.W. Snyder, etc. (Jenks 1901a). Included on this list was Frank Lowe's building on Sixth Avenue (used for offices, amusement room and storehouse), and A.H. Davis' Astoria Hotel. The Astoria Hotel was in particularly bad condition, requiring numerous costly repairs and new flooring throughout. The Army had spent $284.67 in repairs to the building early in 1900 (QMG 1900b). Originally, the Astoria was leased to provide temporary quarters only; all intents were to build a new military reservation at Skagway (Heistand 1899). It was not really suitable for a barracks, because the second story was split up into a number of small rooms, limiting the number of men that could be housed here. The Army had found it

> impossible up to this time to provide a satisfactory sewerage system for this building, and this matter has been a continual source of annoyance and trouble ever since the building has been occupied. Water is struck within less than two feet from the surface on the ground in the rear of this building (Jenks 1901a).[8]

After outlining the problems with the Astoria and the other leased structures, Captain Jenks proposed an ambitious building plan to the Chief Quartermaster of the Columbia, citing gains in health and safety as well as efficiency in operations. Jenks noted in addition that lease values were an "uncertain quantity, owing to the uncertainty of the town itself, due to the Moore land controversy and the boundary question" (Ibid.) The building plan never came to fruition, and leases were renegotiated for various buildings in the area, including the Astoria (Jenks 1901d).

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[8] The old hospital was leaky and dilapidated. By November 1901, two good substantial buildings 280 feet north of the barracks were secured for a new hospital. These were connected and remodeled; the old hospital was retained for the time being to provide an isolated ward for a soldier with typhoid fever (Hovey 1901).

On May 15, 1902, Hovey and his men were relieved by the 106th Company of Coast Artillery commanded by Captain Summerall. The new commander negotiated a number of new leases for structures in Skagway to house the troops and supplies. It is likely that the troops and goods were moved out of the Astoria sometime during 1903 (the building was still under lease in October, 1902) (Browne 1902). The old hotel was removed sometime before 1910, probably in 1907. A photograph dated ca. 1908-1910 shows a vacant trash-strewn lot where the Astoria once stood (Figure 3.15). It is not clear when the other structures on Sixth street were vacated by the Army. A second barracks was evidently erected on the north side of Sixth Avenue sometime after the turn of the century. Insurance maps dating to 1914 show only the Peniel Mission, and buildings I and B along the south side of Sixth.

APPENDIX D: PROPERTY RECORDS, BLOCK 24, LOTS 2 AND 3

LOT 2: R.N. Wilson located lot 2, block 24, on December 8, 1897 (recorded May 31, 1898) (Town Lots, Location Book 3, [v. 24] page 32)[1]

R.E. Ulwer [Ulmer?] located lot 2, block 24, on December 24, 1897. Filed the same day (Town Lots, Location Book 1, page 134).

R.N. Wilson to Theodore Johnson, fraction of lot 2 described as beginning at N.E. corner of fractional lot 2, block 24, thence N. 44 deg., west 15' to post #2, then N. 46 deg. east 100' corner #3, thence S. 44 deg. E. 21' to corner #4, then N. 49 deg. W. 100.2 ft. to point of beginning #1. Indentured November 10, 1899, recorded January 28, 1909, Deed Book 8, page 116.

Theodore Johnson to W.P. Ferguson, fractional lot 2 block 24, indentured April 7, 1900, recorded January 28, 1909, Deed Book 8, page ___.

W.P. Ferguson to Martin Johnson, fractional lot 2, block 24, recorded February 9, 1917, Deed Book 10, p. 57.

Martin Johnson to Lucy Johnson, E 1/2 lot 2 and fractional lot 2 block 24, recorded November 6, 1919, Deed Book 10, p. 258.

Lucy A. Johnson to E.H. Ketchum, E 1/2 lot 2 and fractional lot 2, block 24, recorded August 28, 1920, Deed Book 10, p. 304.

E.H. Ketchum to William Henry Shoemaker, E 1/2 lot 2 and fractional lot 2 block 24, for $400, recorded November 1, 1920, Deed Book 10, p. 315.

William H. Shoemaker paid the taxes on the property from 1920 to 1936. The 1937 taxes were paid by Clayton Polly and wife. No deed was recorded but notes say Polly bought from Judge Ward.

Clayton Polly to William and Beverly Feero, W 1/2 lot 2 block 24, recorded November 28, 1952, Deed Book 14, p. 7.

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[1] The following information on lot 2 was taken from an unannotated list of unknown source on file at Klondike Gold Rush NHP. Because the east half of lot 2 was outside the limits of this project, no additional documentary research was done on it. Research on lot 3 was done in 1985-1987 by the author and historian Frank Norris, KLGO.

William and Beverly Feero to Kenneth and Christine Lamoneaux, W 1/2 lot 2 block 24, recorded November 28, 1952, Deed Book 14, p. 8.

Christine Lamoneaux to Dan A. and Alfreda Demott, W 1/2 lot 2 block 24, recorded November 29, 1958, Deed Book 14, p. 88.

Dan and Alfreda Demott to Fred and Paula Mahle, W 1/2 lot 2, recorded April 22, 1963, Deed Book 15, p. 176.

Frederick and Paula Mahle to Lon and Eunice Gray, W 1/2 lot 2, recorded January 25, 1965, Deed Book 15, p. 388.

Lon and Eunice Gray to Marian Roberta Stevens, W 1/2 lot 2, recorded March 10, 1966, Deed Book 16, p. 51.

Marian Robert (Stevens) Edwards to John R. and Marian Roberta Edwards, W 1/2 lot 2, recorded August 18, 1970, Deed Book 17, p. 65.

NPS purchased property in 1978.

LOT 3: William Bristol located lot 3, block 24 on August 19, 1897 (filed the same day) (Town Lots, Location Book 1, page 30).

Eugene C. Ward also located lot 3, block 24, on August 26, 1897 (filed the same day; Town Lots, Location Book 1, page 54, 1898).

Eugene C. Ward and Robert I. Williams sold "House and lot on Holly Ave.," lot 3, block 24, to J. Cummings for $450 (filed March 2, 1898 (Deed Book 2, page 138).

J. Cummings indentured the west 1/2 of lot 3, block 24 to F.F. Frisbee for $350 on February 12, 1898. (Filed May 31, 1898; [V. 54] Record of Deeds, V. 2, Dyea 1897-1898).

F.T. Keelar (the "money king") acquired the west 1/2 of lot 3, Block 24, "being 25 feet on South Side of Holly Street - by 100 feet running south to alley -& known as the Colorado House Property" ("lot with improvements," tax $4.50), from F.F. Frisbee for $1.00 on August 25, 1898; filed September 1, 1898 ([V. 54] Record of Deeds, V. 2, Dyea 1897-1898, page 438).

F.T. and Mattie Keelar (also spelled Keeler) paid taxes on the west 1/2 of lot 3, block 24 from 1900 through 1915.

1901: F.T. Keelar $2.00 lot + $1 improvements
1902: F.T. Keelar, $2 lot + .$50 improvements, pd. 2/23/03
1903: F.T. Keelar, $2 lot + .$75 improvements, pd. 1/2/04
1904: F.T. Keelar, $2 lot + .$75 improvements, pd. 10/22/04
1905: F.T. Keelar, $2 lot + .$75 improvements, pd. 1/26/06
1906: F.T. "Keeler," $1.75 + $.75 improvements, pd. 2/22/07
1907: F.T. Keelar, $1.75 + $.95 improvements
1912: F.T. Keelar, $1.60 + $.75 improvements
1913: F.T. "Keeler," $1.60 (unimproved). (Colorado House town down?)
1914: F.T. "Keeler," $1.60 (unimproved)
1915: F.T. "Keeler," $1.60 (unimproved)

Mr. and Mrs. J. Mercier paid taxes on the east 1/2 of lot 3, block 24, from 1900 through 1907.
1900: Mrs. J. Mercier, "lot with improvements (hipped roof structure?)," $10 (the assessment was not divided between that for the lot vs. improvements)
1901: Mr. J. Mercier $2 lot + $4 improvements, paid 2/17/02

1902: J. Mercier, $2 lot + $2.50 improvements, paid 3/1/04 (late)
1903: Moore's Wharf Townsite Company, J. Mercier (possible squatter), $2 lot + $2.50 improvements, paid 2/12/04
1904: Mrs. J. Mercier, $2 lot + $2.40 improvements, pd 1/4/05
1905: Mrs. J. Mercier, $1.75 lot + $2.50 improvements, pd. 11/14/05
1906: Mrs. J. Mercier, $1.75 lot + $2.50 improvements, pd. 10/5/08 (late)
1907: Mrs. J. Mercier, $1.75 lot + 2.50 improvements, pd. 10/5/08; "sidewalk repairs," property assigned to Moore's Townsite Company
Moore's Townsite Company paid taxes from 1912 through 1914.
1908-1911 records missing
1912: Moore Townsite, $1.60 (unimproved) pd by D.J. Rich (suggests the hipped roof structure was torn down circa 1910-1911; it was still visible in 1910 photographs)
1913: Moore Townsite, $1.60 (unimproved)
1914: Moore Townsite/D.J. Rich, $1.60 (unimproved) (Norris suggests Mercier was a squatter, and Rich took over the property).
(i.e. D.J. and Mary Rich paid taxes on the east 1/2 of lot 3, block 24 from 1912 to 1914 as the Moore Townsite; paid in own name 1915, $1.60 [unimproved]. Sold to Bank of Alaska in 1916

Keelers sold the west 1/2 of lot 3 to the Bank of Alaska in 1916 (Deed Book 9, p. 371).

East and west halves of lot 3 were combined in 1916 for tax purposes,
1916: April 18, D.J. Rich and Mary Rich sold the eastern half of lot 3, Block 24 to the Bank of Alaska for $100 (Deed Book 9, p. 347).
1916: April 22, F.T. Keelar and Mattie E. Keelar (misspelled "Keeler") sold the western half of the same lot, along with all of adjacent lot 4, also to the Bank of Alaska, for $1.00 (Deed Book 9, p. 371).
1916: all of lot 3 was sold to the Territorial Corporation, a New York firm, on 7/7/1916 for $1. (Deed Book 9, p. 393) ("Bank of Alaska" lined out).
1916: Bank of Alaska paid $4 on an unimproved lot 3 in 1916.
1917: E.A. Rasmuson paid $2 taxes on unimproved lot 3, block 24
1918: Territorial Corporation $2, unimproved lot 3

1919: Territorial Corporation $3 (unimproved, the mill rate went up)
1920: Territorial Corporation $9.75 (unimproved, the assessed value went up).
1921-1928: Territorial Corporation, $650 valuation (Norris' note: Territorial Corporation also owned lot 4, lot 5, and the north 40'8" of lot 6).

Some time during this period, E.A. Rasumson of Skagway, by quit claim deed, sold the east 1/2 of lot 4 and all of lot 3 in block 24 to the Catholic Society of America for $1.00.

1929: Father E. Gallant (Priest, St. Mark's Church, situated on lots 9/10) acquired all of lot 3 in 1929

> 1931: Father Gallant sold the north 1/2 of lot 3 to Harry Ask in 1931. (Note: Father Gallant also owned the west half of lot 4; the Fraternal Order of Eagles took possession of lot 5 and a portion of lot 6.)
>
> 1932: Father Gallant paid taxes on an assessed valuation of $650 for both lots (assuming that there may have been no "improvements" on the north half of lot 3 between 1910-1911 and 1945 when improvements valued at $125 appear.)
>
> 1933-1944: Harry Ask paid taxes on the north 1/2 of lot 3, valued at $350.
>
> 1945-1959: Harry Ask/Ask Estate paid taxes on the north 1/2 of lot 3, valued at $350 + improvements $125 from 1945 to 1949 when the value of the lot dropped to $150 and the improvements were raised to $225. (This suggests either reevaluation of the property or addition or another structure.) When the lot was sold in 1959 to the FOE, the value of the lot was placed at $250 and the improvements at $225.

(Note: Historian Frank Norris' research suggested that the northern half of lot 3, 50x50 in size, had a building on it for about 20 years. No records of such a structure were found except "improvements" listed in tax records. However, former resident, Dr. Polly remembered a shed for a wagon somewhere on lot 3 (Polly 1987).

> 1933-1958: Father Gallant paid taxes on the south 1/2 of lot 3, valued at $300 from 1933 to 1949; from 1950 through 1958 the assessed valuation was only $100. This may have been due to reevaluation or loss of a structure.

> On the 29th of September, 1958, Father Gallant deeded all of the south 1/2 of Lot 3 and the south 1/2 of east 1/2 lot 4 in block 24 for $500 to the Fraternal Order of Eagles Aerie Number 25, Skagway (Deed Book, v. 14, page 205)

1959 the FOE apparently acquired the rest of lot 3. Valuation of the lot was set at $600, and the improvements valued at $807.

1960-1961 FOE paid taxes on lot (valuation $600) and improvements (valuation $807).

1962-1966 FOE paid taxes on lot only assessed valuation $600. Suggests something was removed/torn down, etc.

1967-1969 FOE taxes were on the lot, valued at $850; may have been tax increase

1970-1974 FOE

1974 John R. and Marian Roberts Edwards purchased lot 3 from the FOE in about 1974; Mrs. Edwards had acquired the west half of lot 2 in 1966.

1978 NPS acquired lots 2 and 3.

As the nation's principal conservation agency, the Department of the Interior has basic responsibilities to protect and conserve our land and water, energy and minerals, fish and wildlife, parks and recreation areas, and to ensure the wise use of all these resources. The department also has major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

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